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INDEX VOL. I.

PAGE.

Abdominal Surgery, Cases of..... 550
Abortion, Antiseptics after 54
Abscision, is it Proper?..... 298
Absence of the Spleen..... 455
Acute Goitre 183
Acute Inflammation of the Lungs in Young Children 139
Acute Peritonitis Following Intestinal Perforation 53
Addison's Disease..... 56
Address on Obstetrics..... 97
Address in State Medicine..... 161
Address in Surgery and Anatomy..... 129
Address of President..... 12
Address on Present and Future Tendencies of the Profession in the United States 133
Adhesion of Tongue to Floor of Mouth..... 210
Agaricin in Night Sweats..... 561
Air in Veins, Death from..... 180
Air Passages, Foreign Bodies in..... 422
Albuminuria..... 681
Alcohol, Action of on Heart..... 307
Alcohol as a Food, a Medicine, a Poison, and a Luxury. Pitzer 127
Alcohol as a Germicide..... 411
Alcohol, a Stimulant or a Paralyzant..... 271
Alimentary Canal in Bronchitis, and Phthisis 84
Alimentation, Rectal..... 558
Aliment Preserved by Salicylic Acid..... 536
Allen, D. P , Antiseptics and Non-Antiseptics 292
Allport, W. W., Amaurosis from Dental Irritation 637
Alum Gargles and the Teeth..... 215
Amaurosis from Dental Irritation..... 637
Amaurosis from Tumor in Nasal Cavity..... 177
Amenorrhœa, Conception During..... 622
American Academy of Medicine.....408 457
American Dermatological Association 318
American Gynæcological Society 310 371
American Medical Diplomas Abroad..... 408
American Public Health Association.....319 515
American Society of Microscopists..... .....153 186
Ammoniated Chloroform 180
Ammoniated Mercury Peptone in Syphilis.... 428
Amputation, Atrophy of Brain after 25
Amputations and Hot Water..... 638
Amputation in Preference to Brisement Force 325
Anæmia, Arsenic in..... 178
Anæmia and Somnambulism..... 215
Anæsthesia in Labor..... 104
Anæsthetic, New 675
Anæsthetics, Deaths from..... 51
Anal Erectile Tumor..... 427
Anchylosis, Amputation for..... 325
Anchylosis of Femur, Operation for..... 87
Andrews, E., Medical Lore of Indians..... 401
Andrews, E., Restoration of Lost Cheek..... 20
Andros, F., Medicine and Surgery of Indians.....116, 402
Animal Rotation..... 647
Annual Report of Surgeon General's Office... 625
Anomaly of the Ureters..... 678
Anthrax 336
Anthrax and Bacteria..... 67
Antimony in Skin Diseases..... 592
Antiseptics 411
Antiseptics After Labor..... 54
Antiseptics in Obstetrics..... 106
Antiseptics in Otorrhœa..... 18
Antiseptics, Study of..... 197
Antiseptic Surgery..... 129
Antiseptics and Non-Antiseptics in Surgery... 292
Aortic Deficiency, the Pulse in..... 135
Apnœa, Resuscitation in..... 352
Applied Anatomy 734
Arbutin..... 336
Arm Presentations..... 563
Army Changes..... 736
Army, Medical Museum and Library..... 489
Arsenic, Diffusion Through the Body after Death..... 114
Arsenic in Leucaemia..... 178

PAGE.

Arsenite of Bromine in Diabetes..... 27
Articular Rheumatism.....413, 415
Ascites, Early Tapping in..... 289
Ashford, F. A., Notice of..... 192
Asiatic Cholera..... 350
Asthma Caused by Nasal Disease..... 295
Atkinson, Wm. B., Symptomatology of Infants 268
Atlee, J. L., Address as President..... 12
Atrophy of Brain after Amputation..... 25
Atropine Poisoning..... 455
Atwood F.. Notice of..... 160

Bache, B. F., Notice of..... 192
Bacilli, the..... 129
Bacilli and Koch..... 410
Bacillus tuberculosis..... 67
Bacillus Tuberculosis in Anal Abscess..... 211
Bacteria 410
Baker, C J., Facial Nerve Paralysis of..... 419
Baldwin, J. F., Costatome in Excision of Rib 557
Barker, R. D., Typhlitis..... 273
Barney, John W., Notice of..... 538
Bartlett, J. K., Address on Obstetics..... 97
Battey's Operation..... 98
Bead-Swallowing 244
Beach, W. M., Milk Sickness..... 71
Beef's Blood in Alimentation..... 179
Bell, Cyrus, Notice of..... 160
Bichromate of Potash Poisoning..... 25
Biliary Calculus Occluding the Rectum..... 537
Bismuth in Fœtid Sweating..... 428
Bitters, Hostetter's,..... 281
Bladder, Catheter in 717
Bladder, Gas in the..... 145
Bladder, Suture of..... 621
Bland, D. W., Double Dislocation of Hip..... 351
Blankenship, J, P., The Pulse After Hanging 658
Blindness in Children, Prevention of 706
Block's Thermometer..... 121
Bloodletting..... 532
Bloodletting in Eclampsia and Pneumonia..... 174
Blood Tumor in Labium 120
Blood, Transfusion of 705
Blut Plattchen..... 66
Boards of Health, Local..... 312
Bodies, Preservation of..... 559
Bontacou R. B., Perineal Urethrotomy for Cystitis 196
Books, List of 716
Books, etc , Received, 32, 127, 158, 191, 222, 379 344
Boothby, E. L., Croup..... 332
Boothby, E. L., Northwestern Association... 379
Boston Letter.....91, 489
Bowditch, H. I., Cremation..... 568
Bowel Obstruction..... 146
Boyd, S. S., Hay Fever..... 631
Brain, Electricity to the..... 534
Brain, Ramrod in..... 118
Brain, Sexual Differences in..... 309
Braley, N. W., Notice of..... 520
Breast Amputation..... 366
Breech Presentations..... 564
Bright's Disease Deafness..... 387
British Medical Association..... 95
Bromide in Diabetes..... 426
Bromine, Arsenite of, in Diabetes..... 27
Bronchitis, Alimentary Canal in..... 84
Brown, Gustavus Sr , Notice of..... 600
Brown, Gustavus Alexander, Notice of..... 602
Brown, Gustavus Richard, Notice of..... 601
Brown, Wm., Notice of..... 602
Bryce, C. A., Ethical Advertising..... 540
Bufalini Prize..... 183
Bureau of Examination for Degrees..... 67
Burnham, W., Notice of..... 191
Burg's Thermometer..... 121
Byford, W. H,, Intra Pelvic Inflammation..... 225
Byrd, W. A., Exsection of Both Hip Joints... 237
Byrd, W. A., New Anæsthetic..... 675

PAGE.

Cæsarean Operation..... 487
Calculus Occluding the Rectum..... 537
Calculus. Removal of Large Cystic..... 649
Calculus, Urethral 145
Calomel and Digestion..... 182
Campbell, H. F., Strictures of Œsophagus... 465
Cannabinum Tannicum..... 210
Cannabis Indica; A Valuable Remedy in Menorrhagia..... 51
Canned Meat Poisoning..... 535
Capron, Geo., Notice of..... 603
Carbolic Acid, an Antiseptic..... 129
Carbolic Acid in Rectum, Death from..... 145
Carmichael, Geo. F., Notice of..... 224
Carter, J. M. G., Trephine in Chronic Pleuritis 242
Casebeer, J. H., Pediatric Medicine 327
Casebeer, J. H., Pediatric Therapeutics 361
Caseine in the Urine..... 426
Cases for Instruments..... 214
Castration for Histeria..... 591
Castration of Tubercular Testicles..... 620
Catalogue of Additions to the Library..... 718
Cathartics, Salines..... 337
Catheters Broken in Urethra.....241, 389, 534
Catheter, Hydro-aerial..... 394
Catheter, Soft Rubber in Bladder..... 717
Caustic Alkali Poisoning..... 558
Cauterizing Ecraseur for Hemorrhoids..... 397
Cephalæmatoma 550
Cervix Uteri, Laceration of..... 97
Chambord, Count, Sickness of..... 451
Champaign, Letter on, Dr. J. M. Sims..... 658
Cheek, Restoration of..... 20
Chemistry, General and Medical..... 734
Chevallereau, A., Sickness o
bord 451
Chicago Letter 90
Chicago Medical Society.....59, 60, 151, 457, 566, 627, 680
Chicago Throat and Chest Hospital..... 660
Chicago Training School for Nurses..... 518
Childhood, Purulent Effusions in..... 382
Children, Common Diseases of 384
Children, Epidemic Jaundice in 321
Children, Inflammation of Lungs in 139
Children, Palatable Drugs for..... 180
Children, School, Short Sight in..... 52
Children, Tobacco Smoking in..... 24
Chinese Method of Determining Paternity..... 487
Chisolm, J. J., Is Abscision Proper..... 298
Chloroform, Ammoniated 180
Cholera.....90, 94
Cholera, Asiatic 350
Cholera Congress 650
Cholera, Egyptian..... 309
Cholera, Pasteur on..... 250
Cholera, Preventive..... 185
Cholera, Progress of 122
Cholera and Yellow Fever..... 218
Chylous Ascites 120
Chylous Urine with Caseine..... 426
Cigarette Smoking..... 85
Cincinnati Letter 149
Circumcision, Modern 87
Clark, H. W., Major Amputations and Hot Water..... 638
Clark, A. P., Letter from.....433, 545
Cleansing the Pharynx, Novel Mode of..... 26
Clinical Character of Wool Sorters' Disease.. 336
Clonic Spasms of Uterus..... 594
Code Controversy.....430, 436
Co-existence of Diphtheria and Typhoid 309
Coffee, Effects of..... 177
Cohen, J. Solis, Tuberculosis of the Larynx... 261
Collective Investigation Movement..... 181
College Appointments 340
College News:.....32, 96, 159
Colorado University..... 183
Coloring Matters in Urine..... 294
Conception During Amenorrhea..... 622
Confiscation of a Medical Journal..... 121
Congenital Ectopia of the Heart..... 646

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PAGE.

Congress, Medical, Proposed 650
Connecticut, Coroners and Examiners in..... 556
Constant Current on the Brain..... 534
Constriction of Pylorus..... 133
Consumption, Infection of..... 425
Consumption, Infection..... 571
Contract Practice and Ethics..... 400
Convulsions, Puerperal..... 565
Cooper. C. N., Phantom Tumor..... 618
Cooper, Geo. F., Notice of..... 224
Cornwell, H. G., Eye Disease Following Brain Disease..... 267
Costatome, the..... 557
Couveuse, the..... 339
Cowden, J. W., on Perityphlitis..... 700
Cox, Christopher C., Notice of..... 223
Cox, Edward, Notice of..... 256
Cramp, Writers..... 335
Crane, C. H., Notice of..... 464
Cremation..... 568
Cronin, P. H., Who Does the Stealing?..... 434
Croonian Lectures..... 253
Croup, Unity of Diphtheritic and Membrane 330
Culbertson, H., Correction..... 352
Culbertson, H., Segmental Features of Glaucoma..... 257
Culbertson, H., Spectacle Frames in Lieu of Nose Pieces..... 381
Cummings, Silas. Notice of 576
Cure of Ranula, New Operation for..... 48
Curtis, Josiah, Notice of..... 223
Cystieercus in the Vitreous Body..... 706
Cysticercus in Eye..... 121
Cystitis, Urethrotomy for..... 196
Cystotomy in Enlarged Prostate..... 212
Cysts, Parovarian 731

Dana Anderson Green, Notice of..... 604
Dangerous Soda Water..... 121
Davis, N. S., on Present and Future Tendencies of Profession in the United States..... 33
Davis, N. S., Report on Practice, etc., of Illinois..... 409
Davies, D. C., Placenta Praevia..... 302
Dawson, J. H., Diffusion of Arsenic after Death 115
Deafness and Bright's Disease..... 387
Death from Carbolic Acid in Rectum 145
Death from Foreign Body in Oesophagus, Undetected..... 621
Decapitating Instrument..... 456
Delegates and Members, Annual Meeting in 1883..... 724
Dentition..... 383
Denudation of Teeth..... 633
Deodorization of Iodoform 397
DeWolf, O. C., Glyclosuria 577
Diabetes, Arsenite of Bromine in..... 27
Diabetes, Bromide of Potassium in..... 426
Diabetes and Fractures..... 395
Diabetes, Iodoform in..... 454
Diarrhœa, Fatty..... 28
Diet, Low, Hygiene of..... 416
Digestion and Calomel..... 182
Digestion, Hydrochloric Acid in 536
Digitalis, Poisoning by..... 648
Digitalis, Tincture of..... 121
Dilatation of Pylorus..... 23
Diphtheria..... 413
Diphtheria, Bi-chloride in..... 590
Diphtheria General Paralysis after 649
Diptheria with Typhoid..... 369
Disease of Kidneys and Stricture..... 26
Disease on the Tapis..... 680
Diseases and Bacilli..... 67
Diseases of Children 384
Disinfectants 211
Disinfectant, Heat as a..... 379
Displacement of Heart..... 24
Dissections in London 596
Doctors' Model House 88
Domain of Sanitary Science..... 612
Dougherty, A. N., Notice of..... 256
Dover and His Powder. 600
Drainage Tube, New 121
Drainage of Uterus..... 183
Drugs for Children 180
Dudley, E. C., on Immediate Perineorrhaphy 689
Duhamel, W. J. C., Notice of 288
Dunglison, R. J., Laws on Practice 505
Duty of the Hour..... 385
Dynamite 351
Dynamite as a Tonic..... 179
Dysentery, Epidemic..... 413
Dysmenorrhœa 109
Dyspnœa, Elastic Respiration for..... 395

Ear Disease and the Facial Nerve..... 418
Earle, C. W., Cephalæmatoma..... 550
Early Tapping in Ascites 289

PAGE.

Early Trephining in Bone Diseases..... 299
Eclampsia, Bloodletting in..... 174
Ectopia of Heart..... 646

EDITORIALS:

On Change of Publication..... 28
Meeting in Cleveland..... 56
Do Moral Principles Change?..... 57
Bacillus Tuberculosis 57
Editorial Association..... 58
Endowments 58
Notice 58
Advertisements 89
Epidemic Cholera 90
New Subscribers 90
Discussions Before Sections..... 90
Yellow Fever 122
Progress of Cholera..... 122
Lost Membership..... 148
Meeting of British Medical Association..... 148
Yellow Fever aud Cholera 148
Distant Appointment..... 148
Necrological Report 149
Tri-State Medical Society..... 184
A Safe Anæsthetic..... 184
Cholera 184
Yellow Fever..... 184
Corespondents..... 184
Convention of Microscopists 185
American Association for Science..... 185
Back Numbers 185
Collective Investigation of Diseases..... 216
The St. Louis Medical Society 218
Cholera and Yellow Fever 218
Contract Practice and Ethics..... 246
Epidemic Cholera 248
Letter from Surgeon-General Crane..... 248
Yellow Fever..... 248
Explanation..... 275
Progress of State Medicine and State Boards of Health..... 275
Progress of Yellow Fever..... 279
Small Pox..... 279
The American Medical Association..... 311
Epidemic Diseases..... 311
Cholera 312
Observations on Management of Enteric Fevers, etc., Jas C Wilson 315
Tri-State Medical Society..... 340
Prevalence of Epidemic and Infectious Diseases..... 340
American Academy of Medicine..... 370
Opening of Medical Schools 370
Hint to the Dilatory 370
Sir Wm. McCormac 370
Contract Practice and Ethics..... 398
Progress of Infectious Diseases..... 399
Collective Investigation of Disease 399
Trained Nurses..... 430
Novel Mode of Bleeding..... 431
Texas Courier Record..... 431
American Public Health Association..... 431
An Unhealthy City 431
Sanitary Condition of Suez Canal..... 432
Renal Circulation in Fever 432
Explanation..... 456
Death of Surgeon-General Crane, W. H. Byford and B McVickar..... 457
Medical Department of University of Vermont..... 457
Medical Honors 457
Death of M. Thullier 457
Editorial Change 457
Yellow Fever..... 457
American Climatological Association..... 457
American Academy of Medicine..... 488
The American Medical Museum and Library 489
Specialties and Their Ethical Relations..... 511
Explanation..... 512
The Pedicle in Ovariotomy..... 539
Ethical Advertisements..... 540
Medical Advertising..... 561
Unity of Diphtheritic and Membrane Croup 562
British Medical Association and its Journal 596
American Public Health Association 597
American Climatological Association 597
Notice 597
Quackery and the Illinois State Board of Health..... 604
Preparations of the Committee of Arrangements for the Next Session..... 623
American Public Health Association 624
Ohio State Sanitary Association 656
Proper Material for Medical Society 65c
The International Review of Medical and Surgical Technics 651
Collective Investigation of Disease..... 679
Physiology aud Hygiene in Literary Colleges..... 679
Changes in Medical Journals..... 679

PAGE.

Notice, Polyclinic 680
To Subscribers..... 680
Index Medicus 708
Investigations, Original, ... 708
Number Seven of Journal 710
Explanations 730
Corrections 731
Error Corrected..... 710
Ethics and Town Poor. &c..... 709

Effusion of Blood in the Cavity of Retzius..... 454
Egyptian Cholera..... 309
Elastic Respiration for Dyspnœa..... 395
Elbow, New Method of Reduction of..... 215
Electric Light in Medicine..... 26
Electric Light for Microscopy..... 89
Electric Light in Surgery..... 130
Electricity to the Brain. 534
Elements of Prognoses and Therapeusis of Tuberculosis of the Larynx..... 261
Eliot, Gustavus, Coroners and Examiners in Connecticut 556
Eutropion, Relieving Irritation in..... 538
Epidemic, Peculiar 413, 414
Epidemic at Pakhoi..... 558
Epidemics in Illinois..... 413
Erectile Anal Tumor..... 427
Erectile Tumor During Pregnancy 394
Ergot in Labor..... 104
Ergotine in Post-partem Hemorrhage..... 592
Ergotine in Prolapse of Rectum 145
Erosion of Teeth..... 633
Ergotism, Epidemic of 760
Erysipelas and Parasites..... 67
Ether Habit..... 537
Ether, Subcutaneously..... 88
Ethical Advertising..... 540
Ethicus, Letter by..... 400
Ethmoid Cells, Catarrh of..... 644
Etiology of Lenticular Opacity..... 263
European Professorships 339
Every Patient His Own Case-Book..... 535
Exchanges 29
Exchanges and Books..... 95
Excision of Rib..... 557
Experimental Inquiry into Causes of Variations in Pulse-Wave Velocity, &c. 437
Excision of Both Hip Joints..... 237
Extirpation of Larynx 486
Extraction of Pomade Pot from Rectum..... 536
Extra-Uterine Pregnancy..... 100, 214
Eye, Cysticercus in..... 121
Eye Disease After Brain Disease 267
Eyes, (The) and Menstruation..... 144

Facial Nerve and Ear Disease..... 418
Fæces of Starch-Fed Infants..... 87
Farrand, D. O. Notice of 254
Farr's Tablets 163
Fatty Diarrhœa 28
Femur, Anchylosis of, Treated by Division of Shaft..... 87
Fever, Puerperal 108
Fishes, Poisonous..... 560, 621
Fite, C. C. Cholera..... 185
Flint, Austin, Early Tapping in Ascites..... 289
Foetid Sweating 428, 576
Fœtus Retained Fifty-Five Years..... 454
Forceps..... 103
Forceps Labor..... 562
Ford. L. Des., Notice of 320
Foreign Bodies in Air Passages..... 422
Foreign Body in Ear, Causing Cerebral Hyperæmia..... 538
Foreign Body in Œsophagus, Death from..... 621
Foreign Body in the Urethra..... 52, 54
Foreign Correspondence 403
Fourteen Fractures in Same Subject..... 677
Fractures and Diabetes..... 395
Fractures, Fourteen in Same Subject 677
Fractures of Long Bones 227
Fracture of Patella, Treatment of..... 677
Frankel, Eugene, Facial Nerve Paralysis..... 419
Franklin, G. S., Hygiene of Low Diet 416
Fridenberg, E. L., Heat as a Disinfectant..... 379
Fuqua W. M., Gastro-Enterotomy for Intestinal Obstruction..... 305
Fussell Edwin, Notice of..... 255

Galium Aparine for Ulcers..... 147
Garnett, A. Y. P., Jaundice Among Children 321
Gartner's Ducts in Women..... 622
Gas in the Bladder 145
Gastro-Elytrotomy..... 167, 383
Gastro-Enterotomy for Obstruction..... 305
Gastroscope 650
Gastrotomy 131
Gastrotomy for a Hair Tumor..... 181
Germany, Trichina in..... 509
Germicides..... 410
Germicides, Study of 197

PAGE.

Gilman Judson, Notice of..... 288
Glandular Hypertrophy..... 510
Glaucoma, Segmental Feature of..... 257
Glover, E., Late Resuscitating in Apnœa..... 352
Glycosuria..... 577
Goitre, Acute..... 183
Good, A. H., Dentition..... 383
Good Remedies Out of Fashion..... 337
Gradle, H., Otorrhœa..... 18
Grafting, Sponge..... 145
Granular Lids..... 54
Granular Lids, Jequirity in..... 683
Gynecological Treatment in Hysteria, &c..... 523
Gynesic Emergencies, Appliances for..... 238

Hair Tumor..... 181
Hamilton, George, Bloodletting..... 532
Hamilton, J. B., Nitro-Glycerine and Dynamite..... 351
Hanging, Pulse After..... 658
Hard, A., Catheters Broken in Urethra..... 241
Hardman, L. G., Typhoid Fever..... 571
Harris, Alex., Unity of Diphtheritic and Membranous Croup..... 330
Harvard, Centennial of..... 339
Harvey, Wm., Removal of Remains of..... 596
Haukhurst, D. C., Notice of..... 254
Hawley, Geo. B., Notice of..... 687
Hay Fever..... 434, 631
Hay, W., Moral Insanity..... 482
Haynes, T., Notice of..... 224
Health Law in Michigan..... 95
Heart, Action of Alcohol on..... 307
Heart, Ectopia of..... 646
Heart, Traumatic Displacement of..... 24
Heat as a Disinfectant..... 379
Heating Surgical Instruments..... 427
Hemenway, H. B., Duties of Members of Societies..... 420
Herniatrophy, Complete Progressive..... 178
Hemorrhage, Post Partum..... 101
Hemorrhage, Post Partum, Ergotin for..... 592
Hemorrhoids, Cauterizing Ecraseur for..... 397
Herrmann, Friedrich, Jubilee of..... 508
Hernia, Cure of..... 141
Hernia, a Form Liable to be Overlooked..... 203
Hernia, Operations, Omentum in..... 584
Hernia and Testis in Perineo..... 367
Hersom, A. N., Notice of..... 687
Hertzog, W. F., Puerperal Eclampsia..... 220
Hip, Double Dislocation of..... 351
Hips, Simultaneous Dislocation of Both..... 193
Hip Joint Exsection..... 237
Hixson C., Hay Fever..... 434
Hæmophilia..... 349
Hollister, J H., Address as Chairman on Practice, etc.,..... 65
Holmes, C. C., Notice of..... 254
Hopper, H. A., Notice of..... 352
Horseflesh Consumed in France..... 538
Hostetter's Bitters..... 281
Hot Climates, a Peculiar Disease of..... 508
Hot Water and Amputations..... 638
Humbert, F., Catarrh of Ethmoid Cells, etc.. 644
Hydatid Tumor, Rupture of..... 248
Hyde, J. N., Study of Syphilitic and Non-Syphilitic Eruptions..... 353
Hydro-Ærial Catheter..... 394
Hydrochloric Acid in Stomach Digestion..... 536
Hygiene of Low Diet..... 416
Hygienic Work..... 162
Hypodermics in Piles..... 245
Hypodermic Uses of Morphia..... 27
Hysteria, Castration for..... 591
Hysteria, Gynecological Treatment in..... 528
Hystero Epilepsy and Pregnancy..... 733

Icthzol..... 88
Illinois, Report on Practice, etc., of..... 409
Imperforate Urethra..... 147
Improvement in Medical Treatment..... 411
India, Medical Women for..... 486
Indiana, State Medicine in..... 340
Indianapolis, Letter from..... 713
Indians, Medical Lore of, 116, 401..... 402
Index, General to Volumes of Transactions.. 29
Induction Balance..... 131
Infants, Digestion of Starch..... 86
Infants, Symptomatology of..... 268
Infantile Paralysis..... 334
Infection of Consumption, 425..... 571
Influence of Morphinism on Pregnancy..... 649
Ingals, E., Serpent Bites..... 249
Inguinal Hernia..... 203
Inhalations, Mineral Water..... 339
Injections Into Optic Nerve..... 594
Innominata, Ligature of..... 134
Insanity..... 161
Insanity, Increase in United States..... 668
Insanity, Moral..... 482

PAGE.

Inspection, Vessel..... 595
Instrumental Cases..... 214
Instruments for Collecting Morbific Germs Exhaled with the Breath..... 56
Instrument for Opening Pelvic Abscesses..... 518
Instruments, Heating of..... 427
Intestinal Obstructions, Surgical Treatment of..... 170
Intoxication, Iodoform..... 396
Intra-Abdominal Pathology..... 131
Intra-Pelvic Inflammation..... 225
Intra-Vesical Pathology..... 131
Iodine Painting in Variola..... 593
Iodine in Typhoid..... 412
Iodoform, Action of..... 594
Iodoform, Deodorization of..... 397
Iodoform in Diabetes..... 454
Iodoform Intoxication..... 396
Iodoform Plaster..... 210
Iodoform Poisoning..... 396

Japan, Medical Notes on..... 21
Jarvis, W. C., Tonsillotomy..... 17
Jaundice, Epidemic Among Children..... 321
Jaundice, Obstructive..... 212
Jenkins, J. F., Prolapsus Ani..... 248
" " Trained Nurses..... 515
Jequirity in Granulated Lids, 54..... 683
Jerome, Jas. H., Notice of..... 223
Johnson, J. B., Letter on St. Louis..... 658
Johnson & Wright, Nerve Stretching..... 508
Jones, C. V., Notice of..... 602
Journal, Daily Medical..... 596
Journalism Devoted to the Promotion and Concentration of Medical and Surgical Science..... 42
Jubilee of F. Hermann..... 508
Judicial Council Minutes..... 50
Kairine..... 89
Keyt, A. T., the Pulse in Aortic Deficiency 135
Keyt, A. T., Facts and Experiments on Variations of Pulse-Wave in Man, and Elimination Causes, 437, 605..... 662
Keyt, A. T., Corrections by..... 221
Kidneys, Operations on the..... 143
Koch, and the Bacilli, 67, 129, 166..... 410
Koroniko..... 336

Labor, Antiseptics After..... 54
Labor, Blood Tumor in Labium During..... 120
Labor, Ergot and Anæsthesia in..... 104
Labor, Means to Shorten..... 241
Labor Pain, What Can Be Done to Shorten 521
Labium, Blood Tumor in..... 120
Laceration of Cervix Uteri..... 97
Laceration of Perineum..... 627
Lambert, S. H. on Hæmophilia..... 349
Lambert, S. H., Stricture of Œsophagus..... 632
Landis, H, G., Post Pastum Polypoid Tumors..... 205
Laparotomy..... 131
Larynx, Extirpation of..... 486
Larynx, Tuberculosis of..... 261
Lawton, S. Notice of..... 352
Leal, John R., Notice of..... 406
Leaman, H., Amputation of Breast..... 366
Leffmann, H., Duty of the Hour..... 385
Lemon Juice and Oysters..... 210
Lenticular Opacity..... 263
Leprosy and Bacilli..... 67
Lucæmia, Arsenic in..... 178
Lithophone..... 707
Letter from Indianapolis..... 713
Letter from Washington..... 715
Lyman, Geo. N., on Lithæmia, &c..... 692
Lewis, Emmons, Notice of..... 288
Librarian, Report of..... 718
Ligature of Innominatœ..... 134
Ligature Tightener..... 88
Lightning Stroke, Case of..... 678
Liquid Oxygen and Nitrogen..... 487
Lithæmia, Connection with Tinnitus Aurium and Vertigo..... 692
Lithæmia, Its Diagnosis, &c..... 696
Lithotomy, Supra-Pubic..... 349
Liver, Partial Regeneration of..... 453
Local Use of Antiseptics After Labor and Abortion..... 54
London Letter..... 686
Long Bones, Fractures of..... 229
Longevity of Savans..... 576
Low Diet, Hygiene of..... 416
Lung Inflation in Children..... 139
Lupus, Scraping and Scarification in..... 429
Lythrum Salicaria, Use of..... 677

Maggot Eggs Causing Catarrh of Ethmoid, &c..... 644
Male Breast, Milk in..... 181
Malposition of a Tooth..... 680

PAGE.

Man According to Nature..... 207
Manly, Geo., Consumption Infectious..... 571
Mansfelde, A. S. V. Nebraska's Field of Medicine..... 390
Manufacturing Chemists..... 401
Marcy, H. O. Germicides..... 197
Marcy, H. O., Intestinal Obstructions..... 170
Marcy, H. O., on Journalism Devoted to the Promotion and Concentration of Medical and Surgical Science..... 42
Marcy, H. O., Laws on Practice..... 505
Marsh Mallow in Psoriasis..... 705
Marcy, H. O., Recent Advances of Sanitary Science..... 493
Marcy, H. O., Restoration of Perineum by a New Method..... 477
Markham, N. C., Rupture of Hydatid Tumor 248
Marshall, J. S., Denudation or Erosion of the Teeth..... 633
Marshall, J. S., Pyorrhœa Alveolaris..... 641
Martin, H. A., An Appliance for Gynesic Emergencies..... 238
Mason, Augustus, Notice of..... 191
Massage, Risks of..... 182
McCulloch, T. C.: Bloodletting in Eclampsia, &c..... 174
McDowell, Geo. M., Notice of..... 128
McGill Medical School..... 287
McIntire, Chas., Is it Fair?..... 479
Mechanical Nurse..... 339
Mechanical Remedies in Skin Diseases..... 75
Medical Benefit Society..... 30
Medical Education and Degrees in England 250
Members and Delegates..... 724
Medical Corps of the Army..... 716
Medical Corps of the Navy..... 716
Medical Brethren Abroad, How they Regard Us..... 710
Medical Jurisprudence..... 621
Medical Legislation..... 245
Medical Lore of Indians..... 401, 402
Medical Notes on Japan..... 20
Medical Profession, Its Political Position..... 479
Medical Register of the World..... 652
Medical Society Items..... 158
Medical Societies Teaching and Licensing..... 31
Medical Titles..... 651
Medical Societies, Officers of..... 32
Medical Women for India..... 486
Medicine &c., of Indians..... 116
Membership Dues and Subscriptions..... 29
Menorrhagia, Cannabis Indica in..... 51
Menstruation and the Eyes..... 144
Mercury Bichloride in Diphtheria..... 590
Metallotherapy in Hysteria..... 210
Method of Relieving Irritation in Entropion... 538
Michigan State Board of Health..... 163, 544
Michigan Medical Law..... 95
Micro-Organisms and Disease..... 493
Micro-Parasitic Organisms..... 66
Microscopic Preparations as Illustrations..... 596
Microscopic Work..... 66
Microscopy, Electric Light in..... 89
Midwifery and Gynecology..... 591
Milk, Continuous Flow of..... 22
Milk in the Male Breast..... 181
Milk Sickness..... 71
Mineral Water Inhalations..... 339
Minnesota, State Medicine in..... 342
Minutes of the Judicial Council..... 50

MINUTES OF THIRTY-FOURTH SESSION :—
Address of Welcome..... 1
Committee on Nominations..... 2
Constitutional Amendment..... 2
Army Museum and Library..... 3
Report on Journal..... 4-7
Trustees Appointed..... 7
Trained Nurses..... 8
Delegates Abroad..... 8
Code of Ethics..... 9
Treasurer, Report of..... 9
Librarian, Report of..... 9
Officers for 1884..... 10

Minutes of Section on Children..... 347
Minutes of Section on Dental and Oral Surgery..... 652
Minutes of Section on Obstetrics and Women 156
Minutes of Section on Ophthalmology, &c.... 281
Minutes of Section on Practice, etc..... 123
Minutes of Section on Surgery..... 189
Minutes of Section on State Medicine..... 220
Mississippi, State Medicine in..... 342
Missouri, State Medicine in..... 340
Mixen, S. F., Notice of..... 406
Model House..... 88
Modern Circumcision..... 87
Montgomery, Joseph Foutleroy..... 716
Monument to Pinel..... 710

PAGE

Monkey, Syphilis in ... 648
Monoplegia of Lower Extremities ... 26
Monstrosity, 53 ... 122
Montgomery, Edw., Notice of ... 548
Moore, R. L., Common Diseases of Children 384
Moral Insanity ... 482
Morphia, Uses of Hypodermically ... 27
Morphinism on Pregnancy ... 649
Morris, John, Means to Shorten Labor ... 241
Morris, John, What Can Be Done To Shorten Labor Pain ... 521
Morrison, Jas., Notice of ... 192
Mortality of Cities of Europe ... 121
Mosher, Jacob S, Notice of ... 407
Mothers Milk in Nursing ... 86
Motor Localization in Cerebral Cortex ... 610
Murray, R. D, Treatment of Yellow Fever 68
Mussey, W. H., Notice of ... 405
Mycetoma of the Foot ... 244
Myer, W. H., Notes on Tracheotomy ... 422
Myer, W. H., Purulent Pleuritic Effusion in Childhood ... 382

Naphthol, Use of, 309 ... 501
Nasal Disease and Asthma ... 295
National Fellow of Medicine ... 68
Naval Laboratory ... 279
Navy Changes ... 736
Nebraska's Field of Medicine ... 390
Necrology ... 96
Nephoraphy ... 134
Nerve Stretching, 504 ... 597
Neurological Association ... 59
New Anæsthetic ... 675
New Blood Corpuscle ... 66
New Books. 428, 574 ... 688
New Brunswick Medical Society ... 275
New Instruments, 130 ... 456
New Inventions, 89, 121, 518 ... 650
Newman, S. T., Notice of ... 128
Newman, W. G, H., Notice of ... 603
New Medical Journal ... 576
New Method Reducing the Elbow ... 215
New Operation for Cure of Ranula ... 48
New York Code Controversy, 430 ... 436
Night Sweats, Agaricin in ... 561
Nitrate of Silver in the Throat and Nose ... 265
Nitrite of Sodium as a Toxic ... 676
Nitro-Benzole, Poisoning by ... 453
Nitrogen and Oxygen, Liquid ... 487
Nitro-Glycerine. Toxic Properties of, 179 ... 351
North Carolina, State Medicine in ... 341
Northwestern Inter-State Medical Association, 191 ... 379
Novel Mode of Cleansing the Pharynx ... 26
Nurse, the Mechanical ... 339
Nursing, Mother's Milk in ... 86
Nussbaum's Bracelet ... 335

Obstetrical Society of Philadelphia, Proceedings of ... 732
Obstetrical Society of Philadelphia, 457 ... 562
Obstetrical and Gynecological Society of Washington ... 514
Obstetrics, Address on ... 97
Obstetrics, Antiseptics in ... 106
Obstruction of Bowels ... 146
Obstructive Jaundice ... 212
Ocular Polyp ... 591
Œsophagus, Death from Foreign Body in ... 621
Œsophagus, Strictures of, 465 ... 632
Olfactory Membrane, Structure of the ... 178
Oliver, John B, Vessel Inspection ... 595
Oliver's Urinary Test Papers ... 529
Omentum in Hernia Operations ... 584
Operations on the Kidneys ... 143
Optic Nerve, Injections Into ... 594
Opium Poisoning ... 149
Orchitis After Typhoid ... 180
Otorrhœa Treated With Antiseptics ... 18
Ovaries, Extirpation of ... 732
Ovariotomy in a Child ... 244
Oxygen and Nitrogen, Liquid ... 487
Oxytocic Action of Quinine ... 54

Packard, J. H, Simultaneous Dislocation of Both Hips ... 193
Pains of Labor, to Shorten ... 521
Pakhoi, an Epidemic at ... 558
Palatable Drugs for Children ... 180
Palmer, A. B., Is Alcohol a Stimulant or Paralyzant ... 271
Pancreatic Juice, Pure ... 172
Panification ... 594
Paralysis After Diptheria ... 641
Paralysis of Facial Nerve, With Disease of Ear 418
Paralysis, Infantile ... 334
Paris Letter, 219, 435 ... 571
Paris Medical Practitioners ... 222
Parish, W. H., Porro-Müller Operation ... 447
Parotitis, Epidemic ... 414

PAGE.

Parturition, Death from Air in Veins After ... 180
Pasteur, On Cholera ... 250
Patent Medicines in Italy ... 67
Patella, Treatment of Fracture of ... 677
Patton, A., Inflammation of Lungs in Children ... 139
Peck, W. F., Address in Surgery ... 129
Peculiar Disease of Hot Climates ... 508
Peculiar Epidemic. 413 ... 414
Pediatric Medicine ... 327
Pediatric Therapeutics ... 361
Peebles, A. D., Stricture of Œsophagus ... 632
Pelton, Louis F., Notice of ... 406
Pennsylvania and Maryland Union Medical Association ... 320
Perforation, Peritonitis After ... 53
Perineal Laceration ... 627
Perineum Restoration by a New Method ... 477
Peritonitis After Perforation ... 53
Pertussis ... 413
Perineorrhaphy, Immediate ... 689
Perineum, Two Forms of Rupture of ... 690
Perityphlitis ... 700
Phantom Tumor ... 618
Pharynx, Novel Mode of Cleansing ... 26
Philadelphia Letter, 29, 58, 220, 348 512 ... 570
Phthisis Pulmonalis, etc., Pathology of ... 525
Physiological Action of Iodoform ... 594
Physiological Effects of Coffee ... 177
Physiology in England ... 120
Pierson, Wm., Sr., Notice of ... 407
Piles, Hypodermic Injection for ... 245
Placenta Prævia, 109 ... 302
Placenta, Removal of ... 592
Placenta, Retention of ... 649
Pneumonia, 413 ... 414
Pneumonia, Bloodletting in ... 174
Poisoning, Atropine ... 455
Poisoning by Bichromate of Potash ... 25
Poisoning by Canned Meat ... 535
Poisoning by Caustic Alkali ... 558
Poisoning by Digatalis ... 648
Poisoning by Iodoform ... 396
Poisoning by Nitro Benzole ... 453
Poisoning by Opium ... 149
Poisoning from Snails ... 678
Poisoning by Stramonium ... 22
Poisoning by Vanilla Bean ... 621
Poisonous Fishes, 560 ... 621
Political Powerlessness of the Profession ... 213
Political Position of Medical Profession ... 479
Pollak, S., Ocular Polyp ... 591
Polyp, Ocular ... 591
Pomade Pot in Vagina ... 647
Porro-Müller Operation ... 447
Porter, Wm, Address by ... 364
Postèpileptic Phenomena on Some ... 428
Post Partem Hemorrhage ... 101
Post Partum Polypoid Tumors ... 205
Powdered Beef's Blood in Alimentation ... 179
Practical Clinical Lessons on Syphilis, etc., F. N. Otis ... 516
Practice, etc., Address on ... 65
Practice, etc., of Illinois, Report on ... 409
Practice, Laws Regulating ... 505
Practice, Report on from Kansas ... 587
Pratt, Foster, Address on State Medicine ... 161
Pratt, Foster, Increase of Insanity in United States ... 668
Pregnancy, Erectile Tumor in ... 394
Pregnancy, Extra-Uterine ... 100, 214
Pregnancy, Morphinism in ... 649
Present and Future Tendencies of the Profession, Address on ... 33
Preservation of Bodies ... 559
President's Address ... 12
Presphygmic, Interval ... 437
Prevalence of Epidemics in Illinois ... 413
Prewitt, T. F., New Operation for Cure of Ranula ... 48
Prizes ... 183
Proceedings of Association of American Editors, Record of ... 49
Professional Rewards ... 121
Prolapsus Ani ... 248
Prolapsus of Rectum and Ergotine ... 145
Promotion and Concentration of Medical and Surgical Science, Journalism Devoted to ... 42
Prostate, Cystotomy in Enlarged ... 212
Psoriasis, Treatment of ... 245, 530
Psoriasis Palmaris ... 705
Putnam, J. J., on Lithæmia ... 696
Puerperal Affections of Mother and Child ... 147
Puerperal Eclampsia ... 220, 565
Puerperal Septicæmia ... 107
Puerperal State and Scarlet Fever ... 337
Pulse After Hanging ... 658
Pulse in Aortic Deficiency ... 135
Pulse, Sub-Ungueal ... 620
Purulent Pleural Effusions ... 382
Phylorectomy ... 131

PAGE.

Pylorus, Forcible Dilitation of ... 23
Pyorrhea Alveolaris ... 641

Quackery, War on ... 604
Questions on Etiology of Lenticular Opacity. 263
Quinine, Notes on ... 560
Quinine, Oxytocic Action of ... 54, 185

Railway Surgery ... 135
Raines, Thos. R., Notice of ... 320
Ramrod in Brain ... 118
Ransohoff, Jos., Early Trephining in Bone Diseases ... 299
Radical Cure of Certain Forms of Hernia by a New Operation ... 141
Reasons for Mothers' Milk in Nursing ... 86
Reclination in Spinal Curvature ... 181
Record of Proceedings of Association of American Editors ... 49
Rectal Alimentation ... 558
Rectal Prolapse, Ergotine in ... 145
Rectum Occluded by Biliary Calculus ... 537
Rectum, Pomade Pot in ... 536
Reagan, J. A., Is Quinine an Oxytocic? ... 185
Reality, Mechanism and Diagnostic Significance of Diminution of Retardation of the Pulse in Aortic Insufficiency ... 135
Reduction of Luxation of Thumb ... 120
Reece, Madison, Bichloride of Mercury in Diphtheria ... 590
Reeves, J. E., Sanitary Science ... 612
Reilly, W. F., Cholera ... 350
Remarkable Monstrosity ... 53
Restoration of Cheek ... 20
Resuscitation in Apnœa ... 352

Reviews:
A System of Surgery by Various Authors ... 61
Books and Periodicals Received ... 62
Miscellaneous Items ... 63
Nineteenth Annual Report of the Alumni Association of the Philadelphia College of Pharmacy, 1883 ... 62
Sitzungsberichte der zu Physikalisch-Medicinischen Gesellschaft zu Wurzburg, 1882 ... 62
Treasurer's Report ... 63
Necrology ... 64
Relations of Micro-Organisms to Disease, Belfield ... 94
Guy's Hospital Reports ... 125
Proceedings of Southern Illinois Medical Association ... 126
Transactions of Medical Society of West Virginia ... 126
Bacteria, and the Germ Theory of Disease. Gradle ... 127
Electricity in Medicine and Surgery, Pitzer ... 127
Lessons in Qualitative Chemical Analysis ... 157
Report of Health Officer of District of Columbia ... 158
The Prevention of Insanity, N. Allen ... 251
Anatomy, by Henry Gray ... 252
Malarial Poisoning the Cause of Hæmaturia, W. O'Daniel ... 252
Report of Surgeon-General of the Navy ... 253
Transactions of State Medical Society of Michigan ... 280
John, O., Nasal Disease and Asthma ... 295
Annual Report of U. S. Marine Hospital Service ... 314
Essentials of Bandaging, Berkeley Hill ... 315
Tabulæ Anatomicæ Osteological, Von Klein 315
Pathology and Treatment of Nerve Weakness, C L Dunn ... 342
Collective Investigation Record ... 343
The Fixitive Power of Traction in Hip Disease ... 344
Massage, Its Mode of Application and Effects ... 344
Transactions of College of Physicians of Philadelphia, Vol. VI, 1883 ... 403
The Essentials of Pathology, D. Tod Gillian ... 433
Pocket Book of Physical Diagnosis, etc., E. T. Bruen ... 433
Index Catalogue of Library of Surgeon-General's Office, Vol. IV ... 433
A Complete Hand-Book of Treatment, etc., by W. Aitken ... 463
Transactions of the Medical and Chirurgical Faculty of Maryland ... 463
Proceedings of Connecticut Medical Society ... 491
Collective Investigation of Diphtheria, J. J. Mulheron ... 517
Contagious Diseases of Domestic Animals, Investigations by the Department of Agriculture ... 517

PAGE.

Transactions of Medical Society of State of Pennsylvania ... 546
Transactions of New Hampshire Medical Society ... 574
Pathology, Diagnosis and Treatment of Diseases of Women, by G. Hewitt ... 599
Transactions of Medical and Chirurgical Faculty of Maryland ... 630
Lectures on Orthopœdic Surgery and Diseases of the Joints, by Louis A Sayre, M.D ... 653
Reports from the Consuls of the United States, etc ... 654
Minutes of the State Medical Society of Arkansas ... 654
Fifth Annual Report of the State Board of Health of Kentucky ... 654
Texas State Medical Society, Transactions of ... 683
Maine Medical Society, Transactions of ... 684
Annual Report of U. S. Marine Hospital Service ... 684
Report of Commissioners of Education, 1881 ... 685
U. S. Consular Reports ... 686
Rewards, Professional ... 121
Rheumatism, Articular ... 413, 415
Rheumatism, Treatment of ... 704
Reymond, Prof. Emil DuBois ... 689
Reynolds, Edward, Notice of ... 492
Reynolds, T. N., Alimentary Canal in Bronchitis, etc ... 84
Riberi Prize ... 183
Rib, Excision of ... 557
Richardson, T. G., Use of Trephine in Traumatic Empyema ... 46
Risks of Massage ... 182
Robson's Method for Spina Bifida ... 87
Rochard, Dr, Shooting of ... 600
Rogers, H. R. Cholera ... 94
Rook, C. W., New Anæsthetic ... 675
Rotation, Animal ... 647
Ruschenberger, W. S. W., The Naval Laboratory ... 279
Russey, J. W., Contracts and Ethics ... 400

Sabin, G. G., Enlarged Tonsils ... 185
Salicylate of Bismuth in Typhoid ... 308
Salicylic Acid as a Preserver ... 536
Salines, Action of ... 337
Salivary Digestion of Starch by Infants ... 86
Sanitary Science Advances ... 493, 612
Sanitary Convention in Michigan ... 660
Sanitary Report, Con ... 735
Savans, Longevity of ... 576
Sayre, L. H., Amputation Below Knee in Preference to Buisement Force in Anchylosis ... 325
Scarlet Fever ... 413
Scarlet Fever and the Puerperal State ... 337
Schenk, John V., Notice of ... 408
Schrock, W. H., Man According to Nature ... 207
Schenck, W. L., Report on Practice, Kansas ... 587
School Children, Short Sight in ... 52
Sciatica, and Nerve Stretching ... 597
Scientific Duties of Members of Societies ... 420
Scrotal Presentation ... 592
Sea-Sickness ... 368
Segmental Feature of Glaucoma ... 257
Seiler, Carl, Action of Nitrate of Silver on Mucous Membrane of Throat and Nose ... 265
Seiler, Carl, Pathology of Phthisis Pulmonalis, etc ... 525
Serpent Bites ... 249
Separation of Symphysis Pubis ... 120
Septicæmia Puerperal ... 107
Sexual Differences In Brain ... 309
Sexual Impotence, W. A. Hammond ... 516
Sheffield, D. A., Therapeutics of Typhoid ... 280
Shoemaker, J. V., Mechanical Remedies in Skin Diseases ... 75
Shoemaker, J. V., Naphthol ... 501
Shooting of Dr. Rochard ... 600
Short Sight in School Children ... 52
Sims, James Marion, Notice of ... 659
Simultaneous Dislocation of Hips ... 193
Skin Diseases, Mechanical Remedies in ... 75
Skin Diseases, Antimony in ... 592
Slaughter, A. E., Notice of ... 436
Smith, Q. C., Typhoid ... 515
Snails, Poisoning by ... 678
Soda Water, Dangerous ... 121
Somnambulism and Anæmia ... 215

PAGE.

South Western Wisconsin Medical Association ... 519
Spectacle Frames in Lieu of Nose Pieces ... 381
Spina Bifida Treated by Robson's Method ... 87
Spinal Curvature, Reclination in ... 181
Spiritus Etheris Nitrosi ... 560
Spleen, Absence of the ... 455
Sponge Grafting ... 145, 244
Stair, U P., Is Consumption Infectious ... 425
Starch, Digestion of by Infants ... 86
State Boards of Health ... 612
State Boards of Health. Concerted Action of ... 627
State Medicine ... 627
State Medicine, Address in ... 161
State Medicine, Progress of ... 312
Sternum, Operations on ... 134
Stevenson, Jas. S., Notice of ... 576
Stewed Fruit for Gout and Dyspepsia ... 243
Stomach, Ulcers of ... 215
Stramonium Poisoning ... 22
Stricture and Disease of Kidneys ... 26
Strictures of Œsophagus ... 465, 632
Structure of the Olfactory Membrane ... 178
Subcutaneous Injection of Ether ... 88
Sub Ungueal Pulse ... 620
Successful Cæsarean Operation ... 487
Suffolk District Medical Society, Mass ... 542
Suffolk District Medical Society, Proceedings of ... 711
Suppression of Urine for Eighteen Days ... 560
Supra-Pubic Lithotomy ... 649
Surgical Literature ... 134
Surgical Pantagraph ... 576
Surgeon General ... 287
Surgery ... 648
Surgery, Address in ... 129
Surgery of Intestinal Obstructions ... 170
Suture of the Bladder ... 621
Sweating, Excessive of Feet and Hands ... 245
Sweating, Fœtid ... 516
Symphysis Pubis, Separation of ... 120
Symphysiotomy ... 100
Symptomatology of Infants ... 268
Syphilis and Ammoniated Mercury Peptone ... 428
Syphilis in Monkey ... 648
Syphilitic and Non-Syphilitic Eruptions ... 353

Tadlock, A. B., Letter of ... 514
Tapping Early in Ascites ... 289
Taylor, J. R., Fractures of Long Bones ... 229
Taylor, Wm. H., Gastro-Elytrotomy ... 167
Teaching and Licensing ... 31
Teal, Norman, Infantile Paralysis ... 334
Teeth, and Alum Gargles ... 215
Teeth, Erosion of ... 633
Telegraph in Medical Journalism ... 622
Temperature Reduction After Spinal Hæmorrhage ... 559
Tennessee, Transactions of State Society ... 61
Testis in Perineo ... 367
Therapeutics of Typhoid ... 280
Thermometer, Bloch's ... 121
Thermometer, Burg's ... 121
Thermostat, New ... 731
Thomas, J. P, Cases of Abdominal Surgery ... 550
Thompson, J. L., Questions on Etiology of Lenticular Opacity ... 263
Thoracic Duct, Wounds of ... 455
Thumb Luxation, Reduction of ... 120
Thyro-Cricoid Muscle ... 25
Title, Medical ... 651
Tennitus Aurium ... 387
Tinnitus Aurium and Vertigo with Lithæmia ... 692
Tobacco Smoking in Children ... 24
Tonsillotomy Without Hæmorrhage ... 17
Tonsils Enlarged ... 581
Tooth, Malposition of a ... 680
Toxic, Nitrite of Sodium as a ... 676
Toxic Properties of Nitro-Glycerine ... 179
Toxicology ... 621
Tracheotomy, Notes on ... 422
Trained Nurses ... 515
Transactions of the Society of the State of Tennessee ... 61
Transposition of Viscera ... 54
Traumatic Empyema, Use of Trephine in ... 46
Trephine in Chronic Pleuritis ... 242
Trephining Early in Bone Disease ... 299
Tribulations of a Country Obstetrician ... 214
Trichina in Germany ... 509
Tri-State Medical Association ... 364, 376
Tubercular Testicles, Castration of ... 620
Tuberculosis of Larynx ... 261

PAGE.

Tucker, Geo, G., Notice of ... 407
Tuckerman, L. B., New Method of Obtaining Pure Pancreatic Juice ... 172
Tumor of Hair in the Stomach ... 181
Turnbull, L., Paralysis of Facial Nerve with Disease of the Ear ... 418
Turnbull, L., Tinnitus Aurium ... 387
Turnipseed, Edw. B., Notice of ... 604
Turpentine in Syphilis, etc ... 398
Two Deaths During the Administration of Anæsthetics ... 51
Typhlitis with Autopsy ... 273
Typhoid Fever ... 515, 571
" " Iodine in ... 412
" " Salicylate of Bismuth in ... 308
" " Therapeutics of ... 280
" " With Diphtheria ... 309

Ulcers, Gallium Oparine for ... 147
Ulcers of the Stomach ... 215
Unity of Diphtheritic and Membran. Croup ... 330
University of Niagara ... 310
Ureters, Anomaly of ... 678
Urethra, Catheters Broken in ... 241, 389, 534
Urethra, Foreign Body in ... 52
Urethra, Imperforate ... 147
Urethral Calculus ... 145
Urethral Stricture and Disease of Kidneys ... 26
Urethrotomy for Cystitis ... 196
Urinary Test Papers ... 622
Urine, Coloring Matters in ... 394
Urine Suppressed in Eighteen Days ... 560
Uterus, Cancer of ... 732
Uterus, Candlestick in ... 591
Uterus, Clonic Spasms of ... 394
Uterus, Drainage of ... 183
Use of Trephine in Traumatic Empyemia, Associated with Fistula ... 46
U S. Army, Changes in ... 380, 408, 436, 487, 492, 575, 600, 632, 650, 688
U. S. Navy, Changes in ... 519, 576, 600, 650, 688
U. S. Marine Hospital Service, Changes, etc., in ... 160, 578, 579

Vagina, Pomade Pot in ... 647
Vail, A. M., Fœtid Sweating ... 516
Vance, R. A., Radical Cure of Hernia ... 141
Van Harlingen, A, Psoriasis ... 530
Vanilla, Poisoning from ... 621
Varicocele, New Operation for ... 134
Variola, Painting with Iodine in ... 593
Vaughan, V. C., Diffusion of Arsenic after Death ... 114
Vessel Inspection ... 595
Victoria Medical School ... 287
Virchow, and His Testimonial ... 183
Viscera, Transposition of ... 54
Vivisection in France ... 28

Wakefield, H. P., Notice of ... 352
Ward, E. B., Manufacturing Chemists ... 401
Warder, John A., Notice of ... 128
Washington Letters ... 656
Water Cress ... 336
Weist, J. R., Omentum in Hernia Operations ... 584
What Our Neighbors Think of Us ... 215
What to Do First in Accidents and Emergencies, C. W. Dulles ... 517
What is the Ratiorale of Traction and Counter Traction in Hip Disease ... 344
Wilbur, H B, Notice of ... 254
Willard, W. T., Notice of ... 254
Wilson, A. H., Form of Inguinal Hernia Liable to be Overlooked ... 203
Wisconsin State Medical Society ... 344
Women, Gartner's Ducts in ... 622
Woodman, L. C., Notice of ... 519
Wool-Sorter's Disease ... 336
World, Medical Register of ... 652
Worden, A. L, Catheter Broken in Urethra ... 534
Wounds of Thoracic Duct ... 455
Writer's Cramp ... 335

Yellow Fever ... 122, 282
Yellow Fever, Treatment of ... 68
Young, Noble, Notice of ... 520

Zeisel, H., Honors to ... 296
Zenner, P., Value of Gynecological Treatment in Hysteria ... 523
Zitzer, John Jacob, Notice of ... 548

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ORIGINAL ARTICLES.

MINUTES OF THE AMERICAN MEDICAL ASSOCIATION AT ITS 34TH ANNUAL SESSION, HELD IN CLEVELAND, OHIO, JUNE 5, 6, 7, 8, 1883.

FIRST DAY—GENERAL SESSION.

Promptly at 10:30 o'clock Dr. X. C. Scott arose and said that the time had now arrived for the opening of the Thirty-Fourth Annual Session of the American Medical Association, and he took pleasure in introducing Right Rev. Richard Gilmour, Bishop of Cleveland, who would offer the introductory prayer. Bishop Gilmour closed a few preparatory remarks by repeating the Lord's Prayer. Dr. Scott then said the next thing on the programme was the introduction of the president, Dr. Atlee of Pennsylvania, a gentleman so well known that an introduction was merely a formality. Dr. Atlee was received with rounds of applause. He at once introduced General Ed. S. Meyer, of this city, who delivered the following

ADDRESS OF WELCOME.

GENTLEMEN OF THE AMERICAN MEDICAL ASSOCIATION: On this beautiful morning, when the vernal air is once more redolent of sweetest perfume; when all nature, clad in the newness of life, and, breathing of immortality, extends to you her kindliest greeting, our people, uniting with your brethern here, bid you welcome, most cordial welcome, to our goodly city, trusting that your deliberations here may prove as profitable to you in the future as they shall be pleasant and memorable to us. In the presence of this vast assemblage of the representative men of your high profession in all America, we are profoundly impressed with the thought that though other convocations have been witnessed here from whose deliberations has gone forth that influence which has sometimes guided the destinies of State and Nation, none, in its sublimity and nobility of its aims, has ever transcended that with which we are honored today.

In these quiet, peaceful, dignified gatherings, you but typify that silent, potent power, which, underlying the philosophy of our institutions, carries us irresistibly onward in the great march of progress toward a higher and a better civilization, proclaiming to the world the truth that the greatest triumphs of the Republic are not achieved amid the ravages of destructive war, but follow in the silent train of intellectual pursuit and research in the realms of science and religion, whose paths—ever untrodden by mailed hoof—are lined with the most beautiful flowers of true happiness and peace.

Thus, through the agency of your powerful influence, you hasten the advent of that day—already too long deferred—when from their proud pedestals now lining all the endless halls and corridors of history, the lightnings of retributive justice shall hurl into oblivion the shattered statues of those who, arraying man against his brother, have strewn the paths, over which they rode rough-shod to fame, with the wreck of ruined civilizations; with ravaged and devastated homes; with crushed widows and helpless orphans; with the mangled and broken wrecks of once vigorous manhood, and the moldering bones of myriads of their fellows. And when shall, instead, be enshrined the true heroes of their day, those who, turning war's red sword into the hook and share of husbandry, and lending a helping hand to lift poor humanity upward and onward, have sought only the paths of peaceful progress.

Thus in the application of your science to the discharge of the duties of your profession, do you ever conserve the vital forces of the race, and re-gather and replenish the decaying energies and waning strength of those who, weary and discouraged, have fallen by the wayside.

In this, your ministration, yours is a life of peril, exposure, and unrest, and fraught with gravest responsibility. For, while in thoughtful study, you ascend far above all imagery into the brightest and purest realm of science, in practice you are carried into the innermost courts of love and tenderest affection, of suffering and sorrow, of anguish and despair; often keeping anxious, weary vigil over the dying, only to stand at last with your science exhausted, powerless in the presence of the awful mysteries of death, where but the slightest whisper of hope may fill with radiant light the eye already growing dim, or thoughtless word from flippant tongue rob the poor confiding sufferer of that priceless boon which smooths his dying pillow and bids his weary soul look trustingly beyond. But equally great with its responsibilities are the advantages and opportunities of your high calling. The timely voice of your warning, emanating from authority so high, must, in some measure at least, check the dread course of that monster, dissipation, which has wrecked and ruined myriads of happy homes, and yet stalks boldly abroad—the bane and curse of our civilization. The far-reaching influence of your earnest protest must prove fruitful in those business and home circles of our land, wherein to-day has grown so prevalent the false and artificial system of life, whose extravagant

and ruinous demands require that continued fatal strain of nerve and brain power, which fills our cemeteries with untimely graves, and renders infirm and decrepit thousands upon thousands of men who should still be in their prime.

But due regard for the value of every moment of your time, so apparent in the published assignment of your labors, precludes further encroachment without transcending the limits of propriety. And, therefore, indulging the hope that as you view the beauty with which nature and art have combined to crown our city, and contemplating the busy throng of her thoroughfares, the vast commerce riding her harbor, and the hum and clatter of the varied and numberless industries of her two hundred thousand people, and realize that all this is the growth and product of a single generation, you may also learn that her material progress has but kept pace with the hospitality of her homes. Again bidding you most cordial welcome, gentlemen, we wish you Godspeed in your noble work.

Vice-Presidents Dr. Eugene Grissom, of North Carolina; Dr. Alex. J. Stone, of Minnesota, and Dr. H. S. Orme, of California; the Permanent Secretary, Dr. Wm. B. Atkinson, and the Treasurer, Dr. R. J. Dunglison, of Pennsylvania; the Assistant Secretary, Dr. I. N. Himes, of Ohio, and the Librarian, Dr. C. H. A. Kleinschmidt, of D. C., were also present.

Ex-Presidents Dr. S. D. Gross, Pa.; Dr. N. S. Davis, Ill.; Dr. J. M. Toner, D. C.; Dr. T. G. Richardson, La.; Dr. W. O. Baldwin, Ala., by invitation, were seated upon the platform.

Dr. X. C. Scott, on behalf of the Committee of Arrangements, presented the programme for the entire session, and announced the invitations which had been received and the entertainments which had been prepared for those attending the sessions.

He presented several communications protesting against any change in the Code of Ethics, all of which were referred to the Judicial Council.

The President then delivered the annual address.

On motion of Dr. Jas. M. Keller, of Arkansas, a vote of thanks was tendered to Dr. Atlee for his interesting and able address, and it was referred to the Committee of Publication.

On motion of Dr. Henry Hakes, of Pennsylvania, the members of the Ohio State Medical Society were invited to seats as members of the Association.

Dr. J. S. Billings, U. S. Army, presented a communication from the British Medical Association, asking the American Medical Association to co-operate in the work of meteorological observations in their relation to the clinical history of disease. On motion, it was referred to the Committee on Atmospheric Conditions, of which Dr. N. S. Davis is chairman.

An appeal from Dr. Dwight W. Day, asking a rehearing, was referred to the Judicial Council.

Dr. H. D. Didama, of New York, offered the following, which, on motion, was laid on the table until the report was made by the appropriate committee:

WHEREAS, It is all-important that the medical profession should be provided with accurate and disinterested reports of the various meteorological conditions of the most important of the health resorts, and thus be enabled to judge for themselves of their relative value in the treatment of pulmonary affections: therefore, be it

Resolved, That the American Medical Association, as a body, petition Congress and the Secretary of War to authorize the chief signal officer to establish a certain additional number of stations for climatic observations in such localities as have been shown to exercise a beneficial influence upon pulmonary consumption. And be it further

Resolved, That a committee of five members of the regular profession be appointed to agree upon and designate such localities, to carry into effect the foregoing resolution, and to report the result of their labors from year to year to the Association.

The Permanent Secretary then read the list of delegates and permanent members, as registered.

On motion of Dr. J. M. Toner, the list as read, save any that might be protested against, was adopted.

On motion, the Association adjourned until Wednesday, at 9:30 A. M.

SECOND DAY—GENERAL SESSION.

The President called the Association to order at 9:30 A. M.

Prayer was offered by Rev. Chas. S. Pomeroy, D.D., of Cleveland.

COMMITTEE ON NOMINATIONS.

The Permanent Secretary called the roll of States, and announced the following as composing the Committee on Nominations:

Alabama, W. O. Baldwin; Arkansas, D. Linthicum; California, W. F. McNutt; Colorado, H. K. Steele; Connecticut, T. M. Hills; Delaware, Wm. Marshall; District of Columbia, D. C. Patterson; Georgia, E. Foster; Illinois, C. T. Parkes; Indiana, H. G. Wood; Iowa, W. S. Robertson; Kentucky, L. S. McMurtry; Kansas, W. L. Schenck; Louisiana, J. W. Dupree; Massachusetts, C. A. Savory; Maryland, J. J. Chisolm; Minnesota, B. H. Miller; Michigan, F. K. Owen; Missouri, E. H. Gregory; Maine, A. J. Fuller; Nebraska, V. H. Coffman; North Carolina, E. Grissom; New Jersey, B. A. Watson; New York, H. D. Didama; Ohio, W. M. Beach; Pennsylvania, Samuel D. Gross; Rhode Island, A. Ballou; South Carolina, R. A. Kinloch; Tennessee, D. J. Roberts; Texas, H. C. Ghent; Virginia, Alex. Harris; West Virginia, J. M. Lazzell; Wisconsin, S. C. Johnson; U. S. Marine Hosp., T. W. Miller; U. S. Army, Jos. R. Smith; U. S. Navy, A. L. Gihon; New Mexico, W. R. Tipton; Dakota Ter., A. B. Van Nelson.

CONSTITUTIONAL AMENDMENTS.

On motion of Dr. Foster Pratt, of Michigan, the following amendment to the by-laws was taken up and adopted:

That Section XIII of By-Laws be, and it is hereby, amended so as to read as follows:

That none but members present shall be elected President, Vice-President, Secretary or Treasurer of the Association, Chairman or Secretary of Sections.

ARMY MEDICAL MUSEUM AND LIBRARY.

By request of Dr. S. D. Gross, the Permanent Secretary read the following:

To the President of The American Medical Association,

Sir:—The undersigned, members of the medical profession, desire to call the attention of the Association to a subject of great importance, as they believe, to the profession and to the public welfare.

There has been formed at Washington, under the direction of the Medical Department of the Army, a Museum of Military Medicine and Surgery, and in connection with this, a Medical Library, each of which is believed to be the largest and best of its kind in the world.

The building in which these invaluable collections are stored, collections which can never be replaced if destroyed, is insecure, not fire-proof, in the midst of highly inflammable buildings, and overcrowded. At the close of the last session of Congress, too late for action, a bill appropriating funds for a fire-proof building, of which a copy is appended herewith, was reported. It appears to the undersigned in the highest degree desirable that this bill should become a law at the next session of Congress, and to further this end, that the physicians of the United States should explain to the Senators and members of Congress of the Districts and States to which they belong, the great importance of these collections of books and specimens, the propriety of granting the funds necessary for their maintenance and preservation, the inexpediency of separating them, or removing them from the management under which they have been so successfully conducted, and the necessity of a fire-proof building, that they may be handed down safely to coming generations.

The library now contains seventy thousand volumes and sixty-six thousand pamphlets. The Army Medical Museum contains twenty thousand specimens, illustrating military surgery and medicine. The community, and probably many of the profession, are hardly aware of the great expansion of medical literature within the last thirty or forty years. When one of the undersigned drew up the first Report on Medical Literature, read before the Association at the meeting in Baltimore in the year 1848, there were not as many as twenty-five medical periodicals published in the United States. There are now one hundred and seventeen. A similar increase has taken place in other countries. When it is remembered that the least valuable of these periodicals may contain new and valuable facts not to be found elsewhere, and that such facts are made accessible to practitioners all over the country, by means of the admirable *Index Medicus*, the value of such a storehouse of medical information is sufficiently obvious. It is very important that the Museum and the Library should be kept together, inasmuch as they mutually illustrate each other to a large extent. The building containing both would be a great center of attraction for physicians and surgeons from every part of the country; and not this country only, but from all civilized regions of the earth. During the year 1881, no less than forty thousand persons visited the Museum.

The formation of this great public library has acted as a stimulus to the establishment of medical libraries in many other cities—in Philadelphia, New York, Worcester, Providence, Baltimore, Buffalo, St. Louis, Cincinnati, Brooklyn, and elsewhere.

As regards the Library, it should be urged that it is for the benefit of medical education, and of the medical profession throughout the country, which means, let it not be forgotten, for the benefit of all who come under the treatment of physicians. The physicians of the country appeal confidently to the General Government to lend its aid in helping on the cause in which the common good is so deeply involved. An educated and enlightened medical profession means a great saving of human life and a great diminution of human suffering. To be equal to what should be expected of an institution equipped by the nation for the needs of the nation, we believe the following measures should be adopted:

The Library should receive promptly every medical book, journal or pamphlet published in the world, for which an annual appropriation of ten thousand dollars would be required.

The Museum should have, in addition, an annual appropriation of at least five thousand dollars.

The funds required for completing the index-catalogue, which is the handle of that great civilizing instrument, the Library, should be promptly provided.

A fire-proof building of ample dimensions, for the proper management and safe preservation of the inestimable treasures already collected, and to increase with every succeeding year, should, without delay, be furnished by the General Government.

S. D. Gross,
Austin Flint,
O. W. Holmes.

47th Congress, 2d Session.—H. R. 7681.—*Report No. 1995.*—In the House of Representatives, February 28, 1883. Read twice, committed to the Committee of the Whole House on the state of the Union, and ordered to be printed.

Mr. Shallenberger, from the Committee on Public Buildings and Grounds, reported the following bill:

A Bill authorizing the erection of a fire-proof building in the city of Washington, to contain the records, library, and museum of the Army Medical Department.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That the erection of a brick and metal fire-proof building, to be used for the safe-keeping of the records, library, and museum of the Surgeon-General's Office of the United States Army, is hereby authorized to be constructed upon the government reservation in the vicinity of the National Museum and the Smithsonian Institution, on a site to be selected by a commission composed of the Architect of the Capitol, the Secretary of the Smithsonian Institution, and the officer in charge of the State, War, and Navy Department building, and in accordance with plans and specifications submitted by the Surgeon-General

of the Army and approved by said commission, the cost of the building, when completed, not to exceed the sum of two hundred thousand dollars; the building to be erected and the money expended under the direction and superintendence of the officer in charge of the State, War, and Navy Department building.

Dr. H. A. Johnson, of Illinois, offered the following preamble and resolutions, which, on motion, were unanimously adopted:

WHEREAS, There has been formed in Washington, under the direction of the Medical Department of the Army, a museum of unrivaled completeness and excellence, illustrating military medicine and surgery, and a medical library, which is believed to be the largest and most valuable in the world, and

WHEREAS, It is believed to be of the highest importance for the promotion of medical science, literature and education in this country that these collections should be preserved and made and kept as complete as possible, and

WHEREAS, It is believed that this can be best done by keeping them together under the management which has already produced such excellent results, and by its publications has made them available for use throughout the country; therefore

Resolved, I. That the American Medical Association respectfully urges upon Congress the importance of at once providing a commodious fire-proof building, to contain the Army Medical Museum and Library.

II. That the annual appropriation for this Library should be sufficient to enable it to obtain all new medical publications of all countries as soon as they appear, and also to complete its collection of medical books heretofore published, and that for this purpose the sum of ten thousand dollars is considered a reasonable and proper annual appropriation, and Congress is requested to grant that sum in addition to the amount required for the Medical Museum.

III. That it is of the greatest importance that the index catalogue of this library, now in course of publication, should be issued as rapidly as it can be properly prepared for the press, and Congress is urged to make the necessary appropriations for this purpose.

IV. That a special committee of five be appointed, of which the president of the Association shall be ex-officio chairman, to present this matter to Congress, and to call the attention of State medical societies, and of all who are interested in the progress of medicine to the importance of furnishing to members of Congress and senators full information as to the value of this Museum and Library, and the esteem in which they are held by the medical profession of the United States.

ASSOCIATION JOURNAL—REPORT OF THE BOARD OF TRUSTEES ON THE ESTABLISHMENT OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Dr. Davis, president of the board, reported as follows:

"*Resolved*, That the interests of the Association would be promoted by the publication of its transactions in a weekly medical journal under its own control, instead of in an annual volume, as heretofore, provided it could be done without involving pecuniary embarrassment, or so far engrossing its funds as to prevent the annual encouragement of original investigations by its members.

"*Resolved*, That so much of the report of the committee on journalizing the transactions of the Association as relates to the appointment of a board of trustees, nine in number, and their duties be, and the same is hereby adopted, and that the president of the Association now appoint a special committee of seven to recommend to this meeting of the Association the names of nine members for election to constitute said board of trustees.

"*Resolved*, That the board of trustees so appointed be requested as early as possible to agree upon a plan of a medical journal, to be called the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and to send circulars explaining such plan, and asking pledges of support by actual subscription, to the members of the medical profession throughout the whole country, and thereby ascertain as reliably as possible, what degree of support the proposed journal can have as a basis for commencing its publication. And that said board also proceed to ascertain and agree upon the best methods of publishing said journal, the best editorial services it can secure to take charge of the work, and the best plans for its issue.

"*Resolved*, That said board of trustees be and are hereby instructed under all circumstances, in whatever plans or contracts it proposes to adopt, to retain the entire control over the use of the advertising, as well as of all other pages of the journal that is proposed to be established, and that said board report in full at the next meeting of this Association the plans upon which it has been able to agree, together with the response of the profession to its circulars asking actual subscriptions to the proposed journal, and that the constitutional amendments proposed by Dr. Packard last year be continued upon the table until the report of the board of trustees is received and acted upon.

"*Resolved*, That the treasurer of this Association is hereby authorized to pay out of funds in the treasury the necessary expenses of the board of trustees in printing and distributing its circulars and in conducting its proper correspondence."

In accordance with the foregoing resolutions adopted by the Association at the meeting in St. Paul, June, 1882, nine members were appointed to constitute a board of trustees, consisting of Drs. N. S. Davis, of Illinois, E. M. Moore, of New York, J. M. Toner, of Washington, H. F. Campbell, of Georgia, John H. Packard, of Pennsylvania, L. Connor, of Michigan, P. O. Hooper, of Arkansas, A. Garcelon, of Maine, and L. S. McMurtry, of Kentucky.

Immediately after the adjournment of the Association, a meeting of the board was held at which a majority of the members were present, and an organization was effected by the election of N. S. Davis, of Chicago, president, and J. H. Packard, of Philadelphia, secretary. The president of the board was instructed to proceed with as little delay as possible to the printing of a sufficient number of copies of the report of the special committee on the subject of

journalizing the transactions of the Association made to the meeting in St. Paul, and of the resolutions adopted by the Association, for the use of each member of the board. Also to devise a plan or programme of a weekly journal suitable for the objects of the Association, and submit the same by correspondence to each member of the board. This was done, and a programme for a weekly medical journal containing an average of thirty-two double-column pages of reading matter was agreed upon, each number to contain a department for original articles, embracing all such papers, addresses, reports, etc., as should be referred for publication by the Association, and such other original matter of value as might be contributed for that purpose; a department containing an editorial summary of the progress in the various departments of medical science and practice; an editorial department proper, especially devoted to the discussion of such topics as would be likely to aid in promoting the interests and efficiency of medical organizations, both National and State, and would make the important objects of such organizations better known throughout the whole profession; a department of correspondence from the more important medical centers, both domestic and foreign; and a department for miscellaneous items of intelligence especially in relation to the doings of all medical and scientific societies in this country, and of such notices of the duties of committees, the presentation of papers, the practical working of sections, and the time and place of meeting, as will greatly aid in rendering all the work of this Association, and indirectly of all the State and local associations, more systematic, efficient, original, and co-operative; and consequently far more valuable in scientific and practical results. Having agreed upon the plan of a journal, the board proceeded at once to the printing of 40,000 circular letters containing the principal features of the plan adopted and the objects to be accomplished, together with 40,000 blank pledges of support of such journal if published, and the same number of envelopes, directed, in which to enclose and return the pledge if approved and signed by the recipient, to the president of the board. One copy of the circular letter embracing the programme, one pledge, and one directed envelope, were enclosed in a 1-cent stamped envelope and mailed to members of the profession in all the States and Territories of the Union.

Having very full and recently prepared lists of physicians in the States of Pennsylvania, Indiana, Illinois, Iowa, Minnesota, Texas, Kansas, Dakota, and West Virginia, a larger proportionate number of the circulars reached the members of the profession in those States, than in any of the others. For New York, Connecticut and New Jersey, the volume published in New York containing the registration of regular physicians in those States was used. For Massachusetts, the official list of members of the State and District medical societies was supplied. For Georgia a State gazetteer was used, while for nearly all the other States, only lists of the members of this and the State medical societies, aided in some instances by the last edition of the United Medical Directory. The result was an absorption of three-fourths of the 40,000 circulars in supplying the fourteen States just named, leaving but a limited supply for the other twenty-three States and Territories.

These details in regard to the distribution of circulars are given, to show, first, that the whole number printed was not adequate to supply a full distribution in all the States, even if complete lists could have been obtained without unreasonable expense and delay; and, second, to explain why a much larger number of pledges were returned from some States than others in the same general division of the country. A full comparison of the returns from States well supplied with circulars, with those from States directly adjoining only partially supplied, fully justifies the conclusion that if all had been as well supplied as the first class, the aggregate return would have been increased more than twenty-five per cent. From the distribution actually made, 2,150 answers have been returned. Of these, 12 were direct expressions of opposition to the proposed change in the mode of publishing the transactions; 38 were equivocal, while 2,100 were unequivocal pledges to sustain the proposed journal, either by the prompt payment of annual dues or by subscription. The last complete list of those who had paid their dues with sufficient regularity to retain their membership is in the volume of transactions for 1881, and contains about 2,200 names. By comparing the number of pledges from each State with the number of members of the Association resident in each, we obtain the following result: Twelve of the States have returned 444 more pledges than they had paying members, as indicated in the list of 1881. The other twenty-five States have returned 468 less than the number of members given them in the list of 1881. These figures indicate that at least 500 of the members of the Association had not taken the trouble to make any reply to the circulars received, while nearly the same number, who are not members, have pledged support by subscriptions. It is fair to presume that those members, who through forgetfulness or indifference, have made no reply, will nevertheless continue their membership. And if so, their names should be added to the present number of pledges, making the aggregate over 2,500 as the actual basis of income from membership dues and independent subscriptions. This would indicate a revenue from membership and subscriptions of $12,500. As the proposed journal of thirty-two double-column pages of reading matter, without advertising sheets, can be issued weekly on excellent paper and in good style to the extent of 3,500 copies per week, at an aggregate cost for materials, printing, wrapping and mailing of $8,000 per annum, there would be left in the treasury only $4,500 for editorial work and current expenses of the Association. But such a journal reaching members of the Association and others in every State and Territory of the Union would constitute one of the best mediums for *legitimate* medical advertising, and under reasonably fair business management the net revenue from that source would not be less than $5,000 per annum. This sum, added to the income from dues and subscriptions would cover the cost of publication, allowing $6,000 for editorial work of all kinds, and

leave a balance of $3,500 in the treasury for ordinary expenses and such scientific investigations as might be deemed proper. These estimated expenses are based on actual *bids* from well-established and responsible printing houses, and are for an edition of 1,000 copies in excess of the number of supposed members and subscribers constituting the basis of income. If the estimates both for income and expenditures were limited to the actual number of direct pledges of support, the relative outcome would be the same. But as each new member who may come to this meeting (and there are a considerable number of new members at each annual meeting), will be entitled to a copy of the journal, in addition to the 2,100 pledges already on hand, it would not be safe to provide for less than 2,500 members and subscribers at once. And at least 1,000 extra copies of each issue should be printed, first, to supply new members and subscribers; and, second, to furnish sample copies and complete files when broken by accident or miscarriage. The circular letter containing the programme and blank pledges had been distributed so early in the year that much the larger number of the returns had been made to the President of the Board before the first of January, 1883, and estimates in regard to the cost of publication had been obtained from two reliable printing establishments in Washington, three in Philadelphia, two in New York and two in Chicago. The general results, up to that time, were communicated by letter to each member of the Board, accompanied by an invitation to meet in Chicago for a full consideration of the important matters confided to the Board. The meeting was held on the 17th of January, 1883, in the parlor of the Grand Pacific Hotel, Chicago, at which time a majority of the members, namely, Drs. Toner, of Washington, Packard, of Philadelphia, McMurtry, of Louisville, Davis, of Chicago, and Connor, of Detroit, were present, and full letters also from each of the absent members. After a careful analysis of the returns containing pledges of support, together with the few of an adverse character, the members of the Board voted unanimously in favor of recommending the publication of the journal as previously proposed, being satisfied that it could be done without pecuniary embarrassment to the Association.

Having decided this question, the Board proceeded to consider the general plan on which the work could be most efficiently conducted, and the most favorable place for its publication; which resulted in the adoption of the following propositions:

1. The editor to take direct supervision of the whole work, and for business purposes he should employ a clerk, competent to assist in all business matters, such as keeping books, filing papers, answering business letters, etc.

2. For assistance in editorial work, he should engage an assistant or assistants, specially qualified to select and write up the progress being made in all the departments of medical science and art, and give to each, out of the editorial fund, a fair compensation for the work performed.

He should also, as far as practicable, secure the services of reliable correspondents in each of the great medical centers of the country, and some of those in Europe.

3. He should establish a direct correspondence with the secretaries or proper officers of all the State Medical Societies, with a view of obtaining early and accurate knowledge of their proceedings.

4. Through his clerk he should solicit by circular letters, etc., advertisements from all medical educational institutions and hospitals open for clinical instruction, from book publishers, pharmaceutists, instrument makers, and all other legitimate business interests. But all advertisements of *proprietary, trade mark*, copyrighted, or patented medicines should be excluded. Neither should any advertisements be admitted with one or more names of members of the profession as indorsers, having their *official titles* or *positions* attached.

In other words, no advertisements should be admitted which fairly contravene in letter or in spirit the principles of the national code of ethics.

On examining the estimates furnished by responsible printing houses in the four cities previously named, it was found that the most favorable terms had been offered by Tucker, Newell & Co., of Chicago, and the Board decided to recommend the acceptance of their terms, and Chicago as the place of publication.

It is thus seen that the Board of Trustees has endeavored to promptly and faithfully comply with the instructions given, and execute the work enjoined upon it in the resolutions adopted by the Association at its annual meeting in St. Paul, June, 1882.

1. By agreeing upon a plan for the proposed JOUNAL OF THE AMERICAN MEDICAL ASSOCIATION.

2. By printing and distributing over 40,000 copies of said plan, accompanied by the necessary explanations, and blank pledges asking a return of the latter to the President of the Board.

3. By ascertaining as reliably as possible the cost of publishing the journal on the plan agreed to.

4. By assembling at the proper time and in open meeting, carefully canvassing the results, and arriving unanimously at the conclusion that the publication of the proposed journal, on the general plan already stated, could be undertaken not only without serious danger of producing any financial embarrassment, but, on the contrary, with a fair prospect of greatly adding to the prosperity of the Association, by retaining in active connection with it all who may be added from year to year, and by keeping alive a very much more active and beneficial intercourse with the profession at large. And

5. By a cordial agreement upon the general plan of business management, the most favorable place for publishing, and upon the chief editor to take charge of the work, providing the Association should accept the recommendations and order it to proceed.

The expenses incurred by the Board for printing, stamped envelopes and clerical work in directing and mailing the same, aggregate the sum of $709.00, all of which has been paid by the Treasurer of the Association, and vouchers for which are herewith presented. In conclusion, the following resolutions are submitted for your consideration and action thereon:

Resolved, That the report of the Board of Trustees just read be accepted, and the recommendations contained therein concerning the publication of a weekly periodical, to be called THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, be, and the same are hereby adopted.

Resolved, That the Board of Trustees are hereby instructed to proceed with the publication of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, at as early a day as is practicable, to take the place of the annual volume of transactions, and that the duties formerly devolved upon the standing Committee of Publication be transferred to the Board of Trustees, and that the Secretaries of the Association during or immediately after each annual session be required to transfer to the editor of the JOURNAL the record of proceedings, addresses, and all written reports of committees and officers, papers and contributions that may be referred for publication, either in general sessions or in any of the Sections.

Resolved, That the Treasurer of the Association be, and is hereby directed to make such arrangements with the Board of Trustees in regard to the collection of subscriptions and the disbursement of moneys, as may be necessary for facilitating the business of publishing a weekly medical journal. But all orders on the treasury for disbursements of money in any way connected with the publication must be endorsed by the President of the Board of Trustees.

Respectfully submitted,
N. S. DAVIS,
J. M. TONER,
LEARTUS CONNOR,
HENRY F. CAMPBELL,
ALONZO GARCELON,
P. O. HOOPER,
L. S. MCMURTRY.

Dr. Wm. Brodie, of Michigan, moved to accept the report, and adopt the resolutions.

Dr. W. C. Wile, of Connecticut, moved that it be printed, and made the order for discussion on Thursday at 10 A. M. This was rejected.

Dr. Wm. B. Atkinson, of Pennsylvania, expressed his gratification at the report, and in order that no obstacle might be in the way of the success of the journal, voluntarily offered his services of the past year without fee or reward.

The motion of Dr. Brodie was then adopted, with a few dissenting votes.

Dr. L. S. McMurtry, of Kentucky, Secretary of the Board of Trustees, stated that he had been instructed by the Board to report to the Association that it had now selected Dr. N. S. Davis, of Chicago, as editor-in-chief of the JOURNAL.

Dr. Davis then took the floor, and spoke at some length with reference to the prospects of the JOURNAL, the anxiety which it had given him, and asked the forbearance of the Association with reference to any shortcomings which might appear, and also that the members should not expect too much, and should not be to strict in their comparison of the JOURNAL with the *British Medical Journal*, which had so often been held up for a pattern, for it must be remembered that the *British Medical Journal* had been the work of years.

He further announced that he expected to be able to issue the first number of the JOURNAL early in July next.

Dr. J. Solis Cohen, of Pennsylvania, moved that the Board of Trustees be instructed, in addition to the JOURNAL, to print annually a thin, octavo volume containing the minutes of the Association.

This motion gave rise to discussion, participated in by Drs. Hibbard of Indiana, Quimby of New Jersey, and Byrd of Illinois, and, on motion of Dr. T. G. Richardson of Louisiana, the whole subject was referred to the Board of Trustees.

Dr. L. P. Bush, of Delaware, moved that the Association, in consideration of the long services already rendered, and also the kindness, self-denial, and willingness to assume the duties of editor-in-chief of the new journal, tender a vote of thanks to Dr. N. S. Davis. This was unamiously adopted.

CODE OF ETHICS

Dr. N. S. Davis said he had been directed by the Judicial Council to state that that body assumed all responsibility in putting the pledge to support the Code of Ethics upon the blanks to be signed by delegates and permanent members before registering.

Dr. A. B. Palmer, of Michigan, asked if it was meant that, by signing this blank, the signer was to sustain the present provisions of the Code, or was to sustain the Code, whatever it might be.

Dr. Davis answered that the Code as it now stands was meant, and that if the Association made alterations, that then the changes would be considered as binding.

TRUSTEES.

The President announced the following as the committee to nominate Trustees in place of those whose terms had expired, and to fill the vacancy created by the resignation of Dr. Davis:

Dr. T. G. Richardson, Louisiana.
Dr. Wm. Brodie, Michigan.
Dr. J. F. Hibberd, Indiana.
Dr. W. O. Baldwin, Alabama.
Dr. X. C. Scott, Ohio.

Several questions on ethics were presented by the Chairman of the Committee of Arrangements, and referred to the Judicial Council.

Dr. J. H. Hollister, of Illinois, then delivered the address as Chairman of the Section on Practical Medicine, etc.

On motion, this was referred to the Board of Trustees of the JOURNAL.

Dr. T. G. Richardson announced that the Committee had selected the following to complete the Board of Trustees:

Dr. Alonzo Garcelon, Maine.
Dr. P. O. Hooper, Arkansas.
Dr. L. S. McMurtry, Kentucky.
Dr. J. H. Hollister, Ill.

Dr. J. K. Bartlett, of Wisconsin, then delivered the address as Chairman of the Section on Obstetrics, etc.

On motion, it was referred to the Board of Trustees.

Dr. J. M. Toner, District of Columbia, presented the report on American Medical Necrology.

On motion, it was referred to the Board of Trustees.

On motion, the Association adjourned to meet on Thursday, at 9:30 A. M.

THIRD DAY—GENERAL SESSION.

The President called the Association to order at 9:30 A. M.

Prayer was offered by Rev. N. S. Rulison, D.D., of Cleveland.

TIME OF MEETING.

Dr. J. M. Keller, called up his proposed amendment to the By-Laws, permitting the holding of the annual meetings as late as the first Tuesday of September, if desirable.

On the suggestion of the Permanent Secretary, he agreed to modify it so as to allow the committee on nominations to select the time as well as the place of meeting, and the By-Laws were so amended.

TOXICAL AGENTS.

Dr. D. H. Batchelder, of Rhode Island, offered the following:

WHEREAS, In the opinion of this Association, the laws of almost every State are too lax in relation to the sale of toxical agents, by which suicidal deaths are made easy; therefore,

Resolved, That there be appointed by the President one or more persons or members of each of the States, who shall be members of this Association, to confer with the legislatures of each of the States, by petition or otherwise, for the enactment of more stringent laws in relation to the sale of all toxical agents.

After some discussion, on motion the resolution was adopted.

On motion of Dr. Foster Pratt, of Michigan, it was

Resolved, That the labors of Dr. William Farr, of England (recently deceased), in the organization, classification, and compilation of vital statistics—labors begun in 1838, and perseveringly, wisely, and ably continued by him for nearly half a century—are recognized by the medical profession of the United States as an enduring monument to his ability and learning as a physician; as the real incentive to and the foundation of our own sanitary work, and as a perpetual blessing to present and future generations of our universal humanity, entitling his name and fame to stand with that of other great men, whose genius and labors have resulted in beneficent revolutions of the medical, surgical, and sanitary thought and activities of the civilized world.

TRAINED NURSES.

Dr. S. D. Gross offered the following, which on motion was adopted:

WHEREAS, Good nursing is of paramount importance to the comfort of the sick and the restoration of their health, and,

WHEREAS, The subject is one which strongly addresses itself to the common sense and kindly sympathy of every intelligent member of society; therefore,

Resolved, That this Association, fully recognizing the importance of the subject, respectfully recommend the establishment at every county town in our States and Territories, of schools or societies for the efficient training of nurses, male and female, by lectures and practical instruction, to be given by competent medical men, members, if possible, of county societies, either gratuitously or at such reasonable rates as shall not debar the poor from availing themselves of their benefit.

Dr. Walter Hay, of Illinois, offered a resolution providing for the organization of a special section to be devoted to the subject of psychological medicine. Laid over for one year, as being an amendment to the by-laws.

ATMOSPHERIC CONDITIONS, ETC.

Dr. N. S. Davis presented the report on Atmospheric Conditions and their Relations to the Prevalence of Disease.

The report closed with the following resolutions: That the committee be authorized to furnish their report for publication as a part of the transactions of the Association, and to continue the investigations now in progress, with the privilege of drawing upon the treasury for so much of the unexpended balance of the former appropriation as might be necessary. Second, that the thanks of the Association are hereby tendered to the Superintendent of the Signal Service, General Hazen, for his uniform courtesy and favors extended, and that he be requested to continue the same as the committee may require. The resolutions were unanimously adopted.

The resolutions offered by Dr. Didama in behalf of Dr. Tyndale, of New York, at the session on Tuesday, were then taken from the table and referred to this committee.

By request of Dr. Davis, Dr. Didama, of New York, was added to the Committee on Atmospheric and Ozonic Conditions.

On motion of Dr. Reed, of Iowa, it was

Resolved, That the sympathy of this Association be and is hereby extended to the bereaved wife and family of the late Dr. J. C. Hubbard, of Ashtabula, Ohio, who was so suddenly snatched from our midst while in attendance upon this Association.

FOREIGN DELEGATES.

The president appointed the following as delegates to foreign organizations:

G. J. Engelman, Missouri; W. M. Findley, of Pennsylvania; Walter L. Zeigler, Pennsylvania; M. H. Alter, Pennsylvania; R. B. Cole, California; Jos. H. Warren, Massachusetts; C. H. von Klein, Ohio; W. M. Lawlor, California; S. C. Martin, Massachusetts; J. C. Hutchinson, New York; A. M. Hawes, Michigan; Edward Borck, Missouri; T. F. Prewitt, Missouri; E. P. Allen, Pennsylvania; H. McColl, Michigan; I. N. Quimby, New Jersey; S. C. Gordon, Maine; Eugene Smith, Michigan; M. A. Bogie, Missouri; G. C. Catlett, Missouri; Edward Warren, Paris, France; S. Strausser, Illinois; M. M. Milligan, New Mexico.

CODE OF ETHICS.

Dr. S. Pollak, of Missouri, presented the following:

The St. Louis Medical Society requested me to make a motion to the following effect:

A code of ethics is considered essential for such an organization as that of the American Medical Association, and is equal in importance to the written law of a community. Associations, communities, can only be ruled by laws which are made for themselves and by themselves.

But the best laws became oppressive and inoperative, when the conditions change which called for their enactment. A revision and change of such laws becomes, then, imperative, as is so frequently instanced by the changes of the Constitution of the United States, and of every State in the Union. Municipal and corporation charters are changed by the will of the governed, who delegate that power to their representatives. The Code of Ethics has an existence coeval with the organization of the American Medical Association. It was absolutely necessary then, and it can not be entirely dispensed with now. But in thirty-four years this country has presented so many phases in its development and progress that new laws are being constantly enacted, old laws are repealed or modified to suit the requirements of the time.

The Code has accomplished all that it was designed it should, but at present many of its features are obsolete, and not adapted to our wants. The necessity of an early revision is very apparent, is loudly called for in all parts of our land, and it cannot be repressed much longer.

The American Medical Association alone has the right and power to order a revision. The other medcal organizations, in affiliation with it, can only respectfully *ask* for it, but they cannot legitimately urge or effect it. The time has come when this loud, and very soon, universal, call should be heeded. The excitement and evil consequences of a schism can be easily averted now, and harmony and fraternal feeling may once more be restored among the members of the medical profession. Therefore,

Resolved, 1, That the American Medical Association be respectfully requested to appoint a committee of one member from each State for the purpose of taking into consideration the propriety and advisability of a *revision* of the Code of Ethics of the American Medical Association, and to report thereon at the meeting of 1884.

Resolved, 2, That the committee be authorized to prepare a Code of Ethics, which, in their view, will meet the wishes of the profession, and submit the same to the meeting of 1884.

On motion of Dr. D. Leasure, of Minnesota, it was laid on the table by a large majority.

Dr. Wm. Brodie offered the following:

Resolved, That all papers to be read before the different sections should, before such reading, receive the approval of the chairman of the same.

On motion this was laid on the table.

On motion of Dr. N. S. Davis, Dr. Mark L. Nardyz was invited to a seat with the Association.

Dr. W. F. Peck, of Iowa, then delivered the address as Chairman of the Section on Surgery and Anatomy.

On motion it was referred to the Board of Trustees.

Dr. Foster Pratt, of Michigan, delivered the address as Chairman of the Section on State Medicine.

On motion, it was referred to the Board of Trustees.

The Treasurer presented his report:

REPORT OF THE TREASURER.

The Treasurer has the honor to report a balance in the treasury at this date of $903.93. There is but little of interest to report in regard to the funds of the Association, except, perhaps, the fact that the amount—$50—authorized by this body to be paid towards the guarantee fund of the "Index Medicus," was materially reduced by the refusal of a portion of the amount paid, under authorization of the Association, in 1881, and an unclaimed portion of the amount guaranteed in 1882, all of which is respectfully submitted.

RICHARD J. DUNGLISON,
Treasurer.

June 5, 1883.

The Librarian presented his report:

REPORT OF THE LIBRARIAN OF THE LIBRARY OF THE AMERICAN MEDICAL ASSOCIATION.

MR. PRESIDENT: I have the honor to submit the accompanying catalogue of additions made to this library by donations, exchange, and purchase during the past year. The catalogue shows that since the last report of my predecessor, Dr. Wm. Lee, there have been added 115 distinct titles, exclusive of yearly volumes of transactions of societies, reports of hospitals, boards of health, and volumes of medical journals previously catalogued as such. By this addition the library has been increased to 1,817 distinct titles, representing about 5,713 volumes, inclusive of pamphlets.

The donations to this library, as a rule, consisted in monographs presented by their authors, the library otherwise depending upon its own resources to obtain periodicals by exchange.

I respectfully recommend that the home and foreign exchanges be continued, and, wherever possible, increased; that $200 be placed at the disposal of the Librarian, to be expended as heretofore for the purposes of binding and purchase of periodicals, proceedings, and transactions to complete sets already in our possession; also that $50 be again subscribed to the Index Medicus under the same conditions as have obtained heretofore, in order that the editors and publishers of this valuable periodical may again be assured of the full appreciation of the Association and of its desire to ensure the success of their work.

In conclusion, I feel it my duty to state that the admirable system introduced and perfected by my immediate predecessor, Dr. Wm. Lee, has rendered my work as librarian, which, without such system, would have been difficult and laborious, an easy and pleasant task. Respectfully submitted,

C. H. A. KLEINSCHMIDT, M.D., *Librarian.*
3,113 N. St., N. W., Washington, D. C.

PUBLICATIONS.

The Committee of Publication have the honor to present their report for the past year.

Volume 33 of the Transactions was published and issued to the members of the Association early in the

present year, after the usual delay, which seems to be unavoidable in the issue of the annual volumes. The causes which produced such delay have been alluded to in almost every preceding report of the Committee of Publication, and need not, therefore, be dwelt upon at this time. The Committee, with the view of publishing the Transactions at as reasonable a rate as possible, solicited estimates from the various printing establishments of Philadelphia, and awarded the work to the lowest responsible bidder. The Committee have also made arrangements for the printing of the Index of all the volumes of Transactions, in accordance with the instructions of the Association, and it is now being printed as rapidly as possible, under the supervision of the Permanent Secretary, by whom the Index was prepared. The Committee did not receive any instructions from the Association as to the number of copies to print, or the method of its distribution, and they have therefore exercised their own discretion in the matter, and have ordered 1,500 copies, at a cost of about $500, believing that this will be quite as many as the Association will ever need for its members. The Committee have not thought it desirable that a volume of this kind should be distributed in the same way as the annual volume of Transactions. There is a large number of members whose direct interest in the Association is but transient, as has been exhibited in several annual reports of the Treasurer, and there is also a large number who have but recently become connected with the Association, to whom an index would be of but little importance, in the absence of all the volumes to which such an index is a companion. As a general distribution to all past and present members of the Association would be unadvisable and entirely impracticable, the Committee would suggest that the price of the Index be fixed at *one dollar* a copy, postpaid, to meet the outlay for its publication, and the possibility of a large number being left on hand unsold. It is probable that a limited field for the sale of the Index will be found also among medical and general libraries. The expenses of making its publication known and of mailing may be met out of the proceeds of the sale of the work. It is estimated that the Index will make a volume of about 120 pages. As it is desirable that the work, when issued, as it will soon be, should be rapidly distributed, the Committee would respectfully request the Association to instruct them how to act; and in the absence of any explicit resolution on the subject, will accept the simple reception and adoption of this Annual Report of the Committee of Publication as a sanction of the suggestions contained in it.

ALBERT FRICKE,
Chairman Com. of Publication.

June 5, 1883.

On motion, these reports were severally accepted and referred for publication.

OFFICERS.

Dr. Eugene Grissom, Chairman of the Committee on Nominations, presented the following report:

To the President of the American Medical Association:

The Committee on Nominations respectfully presents the following recommendations for officers and members of committees for 1884:

President—Dr. Austin Flint, Sr., of New York.

First Vice-President—Dr. R. A. Kinloch, Charleston, S. C.

Second Vice-President—Dr. T. B. Lester, Kansas City, Mo.

Third Vice-President—Dr. A. L. Gihon, U. S. Navy.

Fourth Vice-President—Dr. S. C. Gordon, Portland, Maine.

Treasurer—Dr. R. J. Dunglison, Philadelphia, Pa.

Librarian—Dr. C. H. A. Kleinschmidt, Washington, D. C.

Place of meeting, 1884, Washington, D. C.; time of holding meeting, first Tuesday in May.

Chairman Committee of Arrangements—Dr. A. Y. P. Garnett, Washington, D. C.

Assistant Secretary—Dr. D. W. Prentis, Washington, D. C.

Judicial Council—Dr. F. D. Cunningham, of Virginia; H. O. Marcy, Massachusetts; W. O. Baldwin; Alabama; J. S. Billings, U. S. A.; Truman W. Miller, U. S. M. H. S.; Eugene Grissom, North Carolina; R. N. Todd, Indiana.

To fill vacancy in Judicial Council—for Class 1884—Dr. E. W. Clark, Iowa.

Practice of Medicine—Chairman, Dr. John V. Shoemaker, of Pennsylvania; Secretary, Dr. W. C. Wile, of Connecticut.

Obstetrics and Diseases of Women—Chairman, Dr. T. A. Reamy, of Ohio; Secretary, Dr. J. T. Jelks, of Arkansas.

Surgery and Anatomy—Chairman, Dr. C. T. Parkes, of Illinois; Secretary, Dr. H. O. Walker, of Michigan.

Ophthalmology, Otology and Laryngology—Chairman, Dr. J. F. Chisolm, of Maryland; Secretary, Dr. J. L. Thompson, of Indiana.

Diseases of Children—Chairman, Dr. Wm. Lee, of Maryland; Secretary, Dr. W. R. Tipton, of New Mexico.

Oral and Dental Surgery—Chairman, Dr. T. W. Brophy, of Illinois; Secretary, John S. Marshall, of Illinois.

State Medicine—Chairman, Dr. Deering J. Roberts, of Tennessee; Secretary, Dr. C. W. Franzoni, of D. C.; Alabama, Jerome Cochran; Arkansas, J. J. McAlmont; California, W. F. McNutt; Colorado, Chas. Denison; Connecticut, C. W. Chamberlain; Dakota Territory, A. B. Van Nelson; Georgia, J. P. Logan; Illinois, O. C. DeWolf; Indiana, George Sutton; Iowa, W. S. Robertson; Kansas, D. W. Stormont; Kentucky, J. P. Thompson; Louisiana, S. C. Chaillé; Maine, S. H. Weeks; Maryland, John Morris; Massachusetts, H. I. Bowditch; Michigan, F. K. Owen; Minnesota, C. N. Hewitt; New Mexico, M. M. Milligan; District of Columbia, S. Townshend; Delaware, L. P. Bush; Oregon, Horace Carpenter; Mississippi, H. A. Gantt; Missouri, Lester Hall; Nebraska, L. B. Larsh; New York, E. M. Moore; New Jersey, Ezra M. Hunt; North Carolina, Jas. McKee; Ohio, T. L. Neal; Pennsylvania, R. J. Dunglison; Rhode Island, C. H. Fisher; Tennessee, C. C. Fite; Texas, Thos. D. Wooten; Vermont, S.

W. Thayer; Virginia, J. L. Cabell; West Virginia, Geo. B. Moffet; Wisconsin, J. T. Reeve; U. S. Army, J. R. Smith; U. S. Navy, J. M. Brown; U. S. M. H. S., H. H. Bailhache; South Carolina, Manning Simmons.

Committee on Necrology—Chairman, Dr. J. M. Toner, Washington, D. C.; Alabama, R. F. Michel; Arkansas, Dr. Turner; California, Henry M. Gibbons, Jr.; Colorado, Chas. Denison; Connecticut, C. H. Pinney; Dakota Territory, A. B. Van Nelson; Georgia, Dr. H. F. Campbell; Illinois, J. H. Chew; Indiana, William Lomox; Iowa, S. B. Chase; Kansas, C. V. Mottram; Kentucky, W. S. Reynolds; Louisiana, Earnest Lewis; Maine, A. J. Fuller; Maryland, Chris. Johnson; Massachusetts, J. H. Gilman; Michigan, W. F. Breakey; Minnesota, F. A. Dunsmore; Mississippi, Wirt Johnson; Missouri, H. H. Mudd; Nebraska, R. C. Moore; New York, H. D. Didama; New Mexico, W. H. Page; District of Columbia, William Lee; Delaware, W. Marshall; New Jersey, G. T. Welch; North Carolina, Hubert Haywood; Ohio, Starling Loving; Oregon, Dr. H. H. Carpenter; Pennsylvania, Frank Woodbury; Rhode Island, W. E. Anthony; Tennessee, J. B. Lindsley; Texas, M. D. Knox; Vermont, O. F. Fassett; Virginia, L. B. Edwards; West Virginia, W. K. Curtis; Wisconsin, E. L. Boothby; United States Army, W. S. Forwood; United States Navy, A. L. Gihon; United States Marine Hospital Service, Walter Wyman; South Carolina, F. P. Porcher.

On motion of Dr. N. S. Davis, the report was unanimously adopted.

Dr. H. D. Didama then read the following letter from Dr. Austin Flint, addressed to him as a member of the Committee on Nominations:

"Circumstances render it necessary for me to return early to day, June 7th, to New York. Will you kindly express to our brethren, the members of the American Medical Association, with my sincere thanks, an assurance that I thoroughly appreciate the great honor which has been conferred on me. I accept the honor, feeling assured that I may confidently expect co-operation and indulgence in my efforts to fulfill the duties which it involves."

On motion, the Association adjourned to meet at 9 A. M.

FOURTH DAY—GENERAL SESSION.

The President called the Association to order at 9:30 A. M.

Prayer was offered by Rev. C. T. Collins, of Cleveland.

The amendments to the Constitution and By-Laws as offered last year were then called up.

The following, offered by Dr. N. S. Smith, Dakota: "To provide for the admission to membership of two delegates from the Medical Bureau of the United States Indian Service, to be nominated by the Surgeon-in-Chief of that Bureau, and approved by the Secretary of the Interior," was, on motion, laid on the table.

The following, offered by Dr. J. M. Toner, D. C.: "That the office of Permanent Secretary be vacated, and that the Nominating Committee hereafter annually nominate a Secretary who will serve without compensation," was withdrawn by Dr. Toner.

The following, offered by Dr. J. H. Sears, Arkansas: "That the Chairman and Secretary of each Section may add any number of earnest workers to their Sections, in addition to those named by the Nominating Committee, and that the Librarian be made a permanent officer," was, on motion, laid on the table.

The following amendment to the By-Laws, offered by Dr. J. W. Smith, Iowa.: Art. II. Sec. 8. Permanent members: strike out the words "but without the right of voting," was, after much discussion, on motion, indefinitely postponed by a very large majority.

JUDICIAL COUNCIL

Dr. N. S. Davis, from the Judicial Council, reported that the petition of D. W. Day be returned, with leave to supplement the paper with a written statement of the character of the new evidence he proposed to introduce. Further, that in the case of D. H. Goodwillie, of New York, the Council decided that his registration be canceled, and the annual dues be returned.

Dr. L. Turnbull, of Pennsylvania, offered a resolution that the legislature of each State be petitioned to pass laws requiring railroad employes to be examined regarding their hearing before taking charge of any railroad train. On motion it was referred to Section on Otology, etc.

Dr. Foster Pratt presented the following, which had been referred to the Association from the Section on State Medicine:

Resolved, That being impressed with the truthfulness and importance of the Memorial of the Parliamentary Bills Committee of the British Medical Association, under date of March 17, 1883, the American Medical Association urge upon the Congress of the United States the subject of competent medical and sanitary service, and proper provision for its maintenance on board all trans-oceanic passenger vessels; and that a committee of five be appointed to promote this object, and to report upon the condition of the subject at the next session.

On motion the resolution was adopted.

The President announced as the committee on the above: Drs. A. N. Bell, New York; A. L. Gihon, U. S. N.; H. O. Marcy, Massachusetts; I. N. Quimby, New Jersey; Henry H. Smith, Pennsylvania.

Dr. A. N. Bell, of New York, offered the following:

WHEREAS, The practice prevails of reading papers before the several Sections, at the option of their authors, without sufficient regard to the special objects for which the sections were created; therefore,

Resolved, All papers hereafter offered or intended to be read before the Association, or any of its Sections, except the address of the President and Chairman of the Sections, shall be first referred to the Trustees of the JOURNAL for classification and appropriate reference.

After much discussion, on motion of Dr. D. F. Cunningham, of Virginia, the whole subject was laid on the table.

Dr. W. Brodie offered the following, which was adopted by a rising vote:

WHEREAS, This Association takes a deep interest in the efficiency of the Medical Department of the United States Army, and

WHEREAS, The late chief of this Department, Surgeon-General Joseph K. Barnes, contributed largely to the efficiency of this Department in the work which it has been and is doing for medical science and education, therefore

Resolved, That this Association receives with profound regret information of the death of General Barnes, and desires to record its appreciation of the great value and importance of the work which he has done and enabled others to do for the advancement of medical science.

Resolved, That this Association recognizes the energy and ability which characterized the administration of General Barnes, and his services in connection with the Army Medical Museum and Library, and the publication of the Medical and Surgical History of the War, and other works of great value to the profession.

Resolved, That a copy of these resolutions be sent to the Surgeon-General of the Army.

Dr. J. M. Keller offered the following, and asked that it be referred to the Section on State Medicine, which was agreed to:

Resolved, That in the very near future, if not now, cremation will become a sanitary necessity in the large cities and populous districts of the country.

The President appointed as delegates to the Canadian Medical Association, Drs. W. Brodie and H. O. Walker, of Michigan.

On motion of Dr. J. M. Toner, it was

Resolved, That we tender a vote of thanks to our Secretary and Treasurer for the efficient and satisfactory manner in which they have discharged their several duties.

By request of Dr. R. F. Blount, of Illinois, Chairman of Section on Diseases of Children, his address was referred to the Board of Trustees without being read.

Dr. I. N. Quimby, New Jersey, offered the following:

WHEREAS, We, the delegates of this Association, have received at the hands of the citizens of Cleveland the most elegant, cordial and unstinted hospitality, and

WHEREAS, To make mention of all the names of the good citizens who have so handsomely entertained us, would be unnecessary, yet, at the same time, we cannot refrain from expressing our special thanks to the physicians of Cleveland for the elegant entertainment at the Opera House; also to Mr. and Mrs. Stewart Chisolm, A. C. Armstrong, R. R. Herrick, W. P. Southworth, Henry A. Stephens, Rev. and Mrs. Chas. Pomeroy, Mr. and Mrs. Leggett, W. G. Rose, W. B. Hale, W. J. Boardman, E. B. Hale, Jesse H. McMath, Jos. Perkins, W. H. Harrison, G. E. Herrick. In all the above handsome homes and palaces we were so kindly and cordially received by the host and hostess, accompanied in all instances by a large number of beautiful and attractive ladies, that many of us, we fear, will find it quite difficult to take our final departure from the city of Cleveland; and when the unkind and cruel hand of time points to the inevitable hour of our leaving, we will feel ourselves inclined, like the unfortunate wife of Lot, constantly to turn back, to receive once more the warm and cordial grasp of the hand in which a heart did beat, and hear again those pleasant voices which did us kindly greet. But whether we come or whether we go, or in whatever country or clime our lot may be cast, one thing be assured, that the kindness and good-will extended to members of our Association have made an indelible impression, which can never be erased or forgotten.

We also wish to extend our hearty thanks to the Cleveland press, especially to the *Herald* and *Leader* for their energy and enterprise shown in getting such extended and accurate daily reports of our proceedings. It is evident that while these papers live, Cleveland will never want for light. Also to Dr. X. C. Scott and his colleagues on the Committee of Arrangements for their efforts to make this meeting a grand success.

After several efforts to amend this resolution, all were negatived, and it was unanimously adopted.

The Sections reported their minutes, which, with the accompanying papers, were referred to the Board of Trustees.

Vice President Dr. E. Grissom having taken the chair, Dr. Atlee made some remarks on taking leave of the Association as its President.

Dr. Alonzo Garcelon, of Maine, offered the following, which was uuanimously adopted:

Resolved, That the thanks of this Association be extended to J. L. Atlee, the retiring President, for the able, dignified, and satisfactory manner in which he has presided over the deliberations of the Association, and that he retires with the best wishes of every member ot this Association for a long continuance of a life so highly useful not only to the present but to all future generations.

In the absence of the other officers elect, Vice President Dr. T. B. Lester, of Missouri, then declared the Association adjourned, to meet in Washington, D. C., on the first Tuesday of May, 1884.

WM. B. ATKINSON,
Permanent Secretary.

ANNUAL ADDRESS

BY JOHN L. ATLEE, M. D., OF LANCASTER, PENN., PRESIDENT OF THE ASSOCIATION.

GENTLEMEN OF THE AMERICAN MEDICAL ASSOCIATION: Permit me to express my feelings of gratitude for the unexpected honor conferred upon me at the last meeting of the Association, and to cherish the hope that in fulfilling the duties of this responsible position I may be sustained by your cordial co-operation. We meet here to engage earnestly in furthering the interests and objects of the medical profession. We have come together from all parts of our broad country, charged with these great responsibilities. It is fitting to express here deep regret at the absence

from our councils of delegates from the Medical Society of the State of New York. Let us hope that this absence may be only temporary, and that at the next meeting every State may be represented.

As specialties are so much in favor at the present time, I have thought it well; though far from favoring them on ordinary occasions, to bring prominently forward, in my address to-day, my own rare specialty, namely, the having been a graduate of sixty-three years' standing. Instead, therefore, of calling your attention to the more strictly scientific subjects that are so generally considered upon such an occasion as this, it has occurred to me that some reminiscences of my early medical life might not be wholly unacceptable, or devoid of interest and instruction.

When I began my medical studies in 1815, there were but few medical colleges in the country—the medical department of the University of Pennsylvania, the College of Physicians and Surgeons of New York, and the colleges at Baltimore, Harvard, New Haven, and Lexington, Ky. The University of Pennsylvania was the leading institution, to which students from all parts of the country came. The facilities for clinical instruction at the university were confined to the Pennsylvania Hospital and the Philadelphia Alms-house; but of these lectures and the distinguished clinical teachers I shall speak again. Having no opportunities for studying practical anatomy before matriculation at the University of Pennsylvania, I devoted myself more particularly to that branch in my first course of lectures, 1817-18. The chair was then filled by Dr. Caspar Wistar, one of the most able and accomplished teachers of anatomy which this country has produced. His amiable deportment and kind treatment of students made an impression upon me which I shall never forget, and after the lapse of more than sixty-five years the thought of him kindles in my breast emotions of genuine pleasure. As I remember him, he was of medium stature, apparently about sixty years of age, and so impressive was his teaching of anatomy, up to the time of his death, which occurred very suddenly, in January, 1818, that his words remain with me yet. He was certainly a man of great personal magnetism, extremely courteous in his manners, and gentle in disposition; he was always ready to converse with the students and help them in their difficulties. It is no wonder that he was greatly beloved by the students. The announcement of his sudden death from disease of the heart, on the night after he delivered his last lecture, produced a shock among the students that I shall never forget.

Just here, I may appropriately allude to the foundation of a social institution, long known in Philadelphia as "the Wistar Parties." Dr. Wistar had been in the habit of inviting to his house, on Saturday evening, men of learning and distinction, both citizens and strangers. The ability and social qualities of the professors of the University of Pennsylvania and of the eminent medical men of Philadelphia, caused always the presence of a large infusion of medical science in the composition of his parties. After his death, these gatherings were revived and continued by his friends, and they were still known as "Wistar parties" in honor of their founder. In this way originated the celebrated social gatherings which occupied so important a share in the social annals of Philadelphia. I remember my gratification when young at meeting some distinguished gentleman from abroad, and many no less distinguished from our own country.

The course of lectures on anatomy, interrupted by the death of Dr. Wistar, was subsequently finished by Dr. John Syng Dorsey, a favorite nephew of Dr. Physick. He completed the course with credit, and was subsequently elected to fill that chair. Unfortunately, he also died from a very short illness, after delivering his introductory lecture, within a week of the beginning of the term. It was a great loss to the university, and a very severe blow to Dr. Physick—one from which he never recovered. At this period there was no American work on anatomy, but about this time Dr. Wistar's Anatomy was published, and adopted as a text-book. It was received with great favor, even with enthusiasm, by the students. The assistants to the professor of anatomy at this period were Drs. William E. Horner and Hugh L. Hodge, afterward highly distinguished in their respective branches, anatomy and midwifery.

Dr. John Redmond Coxe was the professor of chemistry in the winter of 1817-18, a grandson of Dr. John Redman, one of the leading physicians of Philadelphia in his day, and first president of the College of Physicians. Dr. Coxe had the reputation of being one of the most diligent students in Philadelphia. He was very careful in his experiments, and in lecturing was very punctual in filling the whole of the hour allotted to him. The chair of midwifery, during my first course, was filled by Dr. Thomas C. James, a very modest and agreeable gentleman of Quaker origin. He had such a sense of delicacy that he could not bring himself to lecture on the female organs of generation, but entrusted this part of his course to Dr. Horner. Although a graduate of the University of Pennsylvania, he subsequently became a pupil of Dr. Denman, of London, whose work on midwifery, together with that of Burns, and Dr. Dewees' translation of Baudelocque, constituted the principal works on that subject. Dr. James, after Denman, was a strong advocate for the short forceps.

Dr. Nathaniel Chapman, at this time, and for many years afterward, filled the chair of the institutes and practice of medicine. He was a most eloquent and impressive lecturer, and the idol and tried friend and benefactor of the student. He was, moreover, a man of very marked ability, eloquence, and great social qualities. Having to teach the institutes, as well as the practice of medicine, it required two courses of lectures to complete the subject. The physiology of that day was very different from that of the present. The microscope had hardly begun to be applied to the study of anatomy, and so little did Dr. Chapman appreciate it, that it was a standing joke with him to quote old Leeuenhoeck as having discovered with his microscope "twenty thousand devils playing upon the point of a needle," thus foreshadowing some of the most remarkable discoveries of the present day, especially disease germs. Professor Chapman was

thoroughly posted in the departments which he taught, at that time, although they have advanced wonderfully since his day. He was a man of very imposing presence, rather above the medium height, always neat in his dress, perfectly well-bred, and uniformly obliging and polite to the students. I believe that he did more for the advancement of medicine in his day than any other person with whom I was acquainted. He established a school, called Chapman's Institute, for the benefit of his private students, of whom he always had thirty or forty, and other students who chose to attend. The building was in the rear of his house, with a private entrance, and he employed, as teachers of his classes, gentlemen who afterward became eminent professors at the university and at the Jefferson Medical College, among whom may be mentioned Professor William P. Dewees, Hugh L. Hodge, and John K. Mitchell.

Last but not least among the faculty of that day was Dr. Philip Syng Physic, the great American surgeon, who that winter, 1817-1818, delivered his last course of lectures on surgery. A pupil of John Hunter, he taught the doctrines of that great man. As I recall his course of lectures, it seems to me that he was one of the most impressive teachers that I have ever listened to. Dr. Physick was remarkable for great attention to details, and in his operations upon the cadaver he carefully observed all the rules for operating upon the human body. He also recapitulated the lecture of the preceding day before going on with his subject, by questioning the students who occupied the first two rows of seats in the amphitheater. I may refer to one incident which may illustrate his method and his carefulness. On one occasion he stumped the whole class; he had been lecturing on lithotomy the preceding day, and he put the question to the first student, "What instruments should be provided for the operation?" The answer appeared to have been correctly given, but he was not satisfied. The question was repeated to the next student, and finally to the whole class with the same result. Dr. Physick then said it was "a pin, gentlemen, a pin," that was needed to complete the list. This showed his precision, and impressed upon us the necessity of taking care never to go to an operation without the minutest preparation.

Dr. Physick was a man of medium height, with very regular features. His face at that time was pale, as if he suffered from delicate health. He was of very abstemious habits. I remember on one occasion, at a party given at his house, when the servant brought in a tray with wine, I was standing beside Dr. Chapman, when I placed my hand upon a decanter, as I supposed, of wine; Dr. Chapman touched my elbow, and told me not to take that; I filled the glass from another bottle, and afterwards asked the Doctor why he had checked me; he said the first was simply colored water that Dr. Physick had provided for his own use.

In speaking of Dr. Physick's teaching, I should also say that he always lectured extemporaneously, the didactic lectures on inflammation being read by Dr. Dorsey, his nephew. Dr. Physick was dignified in his deportment, and eminently grave; we rarely saw a smile upon his face. His usual dress in the lecture-room was a blue coat with metal buttons, white vest, and drab pantaloons. He was remarkably staid and reserved in his manner, and was always regarded with reverence and great respect by the students. He never indulged in any flights of imagination, and was purely a practical lecturer who brought his knowledge from the stores of his large personal experience.

One of his favorite precepts was to insist upon great attention to diet after surgical operations. I may mention this anecdote: In one of his lectures he spoke of a very important surgical operation, and said that there was a necessity for attention to absolute diet. The next day in recapitulating, he asked a student what was meant by absolute diet. The student said "Toast or barley water." "Will any gentleman tell me what is meant by absolute diet?" appealing to the whole class. There was no reply. "Water, gentlemen, water." A precept I have never forgotten, and which, I think, is not sufficiently observed at the present day after important surgical operations.

The clinical teaching of that day was not given at the medical college, as it now is, but at the Pennsylvania Hospital, and the Philadelphia alms-house, then in the city; each institution affording an excellent school of instruction to the students. As the clinical hours were the same at both institutions, I chose the alms-house as affording a larger field.

Among the clinical teachers of that day, very few were superior to Dr. Joseph Parrish, who had been a pupil of Dr. Wistar. He was a man of most amiable character, thoroughly devoted to the advancement of the profession; having large classes of private students every year, to whom he lectured, and for whom he also provided able assistants to aid in teaching. One of these was the late Dr. George B. Wood. Dr. Parrish was a man of warm sympathies, and he testified to his benevolence in the manner in which he conducted his clinics. Let me give you an illustration. A poor, weather-beaten sailor was brought to the alms-house suffering very much from rheumatism. Dr. Parrish ordered the man to be clothed in flannel, and have a bottle of porter daily. On the next clinic day Dr. Parrish, on inquiring, found that neither had been attended to. He repeated the order, with a mild rebuke to the steward. At the next visit, three days afterwards, finding that his previous orders had been disobeyed, he called for the steward, and remained at the bedside of the patient until the order was fulfilled.

With regard to the treatment of that day, I shall say little; the text-books then studied fairly present it to you. Would that I could speak more satisfactorily of the treatment of the insane as I remember it. They were generally confined in the basement of the alms-house in small cells, some with manacles, others with chains; seldom had they access to fresh air, and often they had nothing but loose straw for their bedding. This unhappy and inhuman state of things continued until Pinel and Esquirol established a course of treatment more consistent with the dictates of science and humanity. In a recent visit to the State Lunatic Hospital, at Harrisburg, Pa., of

which I am a trustee, not one of the four hundred insane inmates was the subject of mechanical restraint.

At that time, the resident physicians at the almshouse were not graduates in medicine, but last-course students, who fulfilled their duties while preparing for graduation. The requirements for graduation were attendance upon two full courses of lectures, of four months each, a written thesis on some medical subject, attendance at the hospital or almshouse, and an oral examination in the presence of the whole faculty.

Many of the elderly gentlemen present to-day must have heard of the much dreaded "green-box." During the time of Drs. Rush and Barton, it was reported that favoritism was shown to their respective students, and the same was said of the students of Drs. Chapman and Dorsey. To obviate this, or the appearance of it, a large green screen was placed across one corner of the room, having a door behind it, through which the candidate entered, and here underwent his examination, unknown to any one but the dean of the faculty. This mode of examination was adhered to until after the death of Dr. Dorsey, when it was optional with the student to go into the green-box or present himself openly before the faculty. Some ten or twelve candidates had such a terror of the green-box that they went to New York, where they obtained the degree of M. D. by undergoing an examination and paying the graduating fee.

It was the time of calomel and the lancet. With regard to the one, I need not speak; but of the latter I feel well assured that the almost total disuse into which it has fallen has cost many valuable lives. From a very large experience in its use, I am satisfied, fully satisfied, that if we depended more on the early use of the lancet in the congestive and inflammatory states of many diseases, our practice would be more successful than it now is. At the present time there is too exclusive reliance upon medicines affecting the nervous and vascular systems, which act with less efficiency and are less prompt. It is, in my opinion, a very important subject, and I feel assured that ere long the lancet will be more freely used than it is now. In the congestive chills preceding inflammatory diseases, and in the cold stages of intermittents, I have frequently broken up the paroxysm, and relieved the patient by the lancet alone.

In the class of 1817-18, there were many men who afterwards became distinguished in their respective departments. Time will not permit me to enumerate them all.

Among the first was one with whom I was very intimate, Dr. George McClellan. A man of great natural talent, quick perception, wonderful memory, prompt to decide and prompt to act, he made himself, during his pupilage, one of the best anatomists in the country, and subsequently brought more talent into surgery, than any man I have ever met with. During his brief, but brilliant career, he performed more surgical operations than any other surgeon in Philadelphia, and he undertook to perform, and did perform successfully, some operations which were considered impracticable by other surgeons. Among these was the removal of the parotid gland. It was my good fortune to visit with him his first patient the day after the operation, and although it was afterwards reported that it was not the parotid gland, I made a very careful examination of the tumor, and of the patient, and was perfectly satisfied of its identity. This operation he performed several times afterwards, one of them on a young Irishman, where Dr. Deal, of Dublin, an eminent surgeon, had previously failed. A beautiful illustration of his diagnostic ability was shown to me when on a visit to Philadelphia. A female infant, about four or five months old, whose parents belonged to one of the most distinguished families in New York, was brought by her father to Philadelphia, to consult the oldest leading surgeons of the city, who all pronounced the case hopeless. The child had from birth a complete paralysis of the right arm and hand. As Dr. McClellan, at that time, was beginning to acquire popularity as a surgeon, the father was persuaded to consult him. Dr. McClellan made a careful examination, and found that the clavicle was pressing on the brachial plexus of nerves, as it passes over the first rib, and that the paralysis was owing to this cause. All that he did was to elevate the shoulder and the clavicle by mechanical means, and the functions of the arm were entirely restored. I saw it playing equally well with either arm on the nurse's lap.

Dr. McClellan was of medium size, fair complexion and blue eyes. He was very attractive and agreeable in his manner, very vivacious, and was called a "bundle of nerves." He was very fond of society, and a general favorite wherever he was known. There was no jealousy in his disposition, and I may be permitted to add that he was the only surgeon in Philadelphia who congratulated me upon the success of my first operation for ovariotomy in 1843, when I revived the operation which, after its introduction by Ephraim McDowell, had fallen into disuse. He sought me at my hotel, when on a visit to the city, and gave me a most cordial embrace.

Dr. McClellan was among the first to suggest and urge the establishment of another medical college, in Philadelphia, and with the assistance of Dr. Eberle, he determined to get a charter from the legislature. Dr. Eberle, being a native of Lancaster county, and, having practiced both in the city and county for several years before his removal to Philadelphia, had many friends there, and wrote to them, asking their assistance in procuring a charter from the legislature. With a view to furthering the cause, a public dinner was given to Dr. Eberle by the leading gentlemen of Lancaster, and resolutions were then passed instructing our representatives at Harrisburg to favor the charter. Notwithstanding the opposition which had always existed among the friends of the university to the establishment of another school, a charter was obtained authorizing the trustees of the Jefferson College, at Canonsburg, to grant degrees in medicine and to locate the school in Philadelphia. Another member of the class of 1817-18, a native of Lancaster, and when young a schoolmate of mine, was Dr. John Rhea Barton, who began the study of medicine with my preceptor, Dr. Samuel Humes, and through the

influence of his uncle, Professor Benjamin Smith Barton, of the university, was appointed a resident pupil at the Pennsylvania Hospital. At that time, I believe, the residents were apprenticed for five years. Such was the distinction he attained in his position that immediately after receiving the degree of Doctor of Medicine he was elected one of the attending surgeons, an unprecedented event. While in this position he acquired the reputation of being one of the most dexterous operators in the country. A gentleman, a physician, who, after graduating here, had spent five years in Paris, and who had seen Dupuytsen, Boyer and Dessault operate, told me that with the exception of Dr. Physick, who had been his preceptor, he had never seen Dr. Barton equalled as an operator. He was ambi-dexterous, and instead of changing sides in amputations, he would change hands.

Among my fellow-students in 1817-18, and fellow-graduates in 1820, I should be unmindful of what is due to extraordinary merit, were I not to speak of one who has done more for American medical journalism, than any other physician in the country. I allude to the late Dr. Isaac Hays, the editor of the *American Journal of Medical Sciences*, by whose labors, professional accomplishments, and excellent judgment, the leading medical journal of this country was established. Having assisted Dr. Chapman in editing *The Philadelphia Journal of the Medical and Physical Sciences*, the motto of which was the ill-natured quotation from Sidney Smith, "Who reads an American book?" Dr. Hays established, in 1827, the "*American Journal of Medical Sciences*," which to this day, both in this country and in Europe, is admitted to be, in character and ability, the first. Modest and unassuming, he scorned the arts by which many seek prominence, and during a long and very busy life, sustained the character of a high-toned and honorable gentleman. To him are we chiefly indebted for the preparation of the Code of Ethics of this Association, which some of our physicians, from motives we cannot appreciate, would be willing to mutilate or destroy.

To another fellow-graduate I may with great propriety allude—Dr. Samuel Henry Dickson, one of the most accomplished scholars, both in medical and miscellaneous literature, it was my good fortune to know. Having obtained, by his extensive acquirements, sound judgment and high character, the first position in his native city, Charleston, South Carolina, he was elected Professor of the Theory and Practice of Medicine in Jefferson Medical College, where he lectured with distinguished ability to the close of his life.

Dr. George B. Wood, known to many of you, was graduated at the end of my first course in 1818. The possessor of an ample fortune, he devoted his wealth, his untiring industry, and his great acquirements to the promotion of sound knowledge, and the welfare of the Medical Department of the University of Pennsylvania.

In the winter of 1819-20, when I attended my second course, a change had taken place in four of the chairs at the University. Dr. Physick, in consequence of the death of Dr. Dorsey, had been elected Professor of Anatomy, and Dr. Gibson was brought from Baltimore to fill the chair of Surgery. Dr. Coxe was taken from the chair of Chemistry to teach Materia Medica, and Dr. Robert Hare was appointed to teach Chemistry. These changes were not very agreeable to those who, like myself, were attending their last course, as they took from the chair of Surgery that great man, Dr. Physick, and placed him in a position where he had to renew his early studies. It placed Dr. Coxe in what might be called his favorite element, for there was hardly a single article of the materia medica from the time of Hippocrates to that day, that he did not notice in his lectures. It was very amusing to the class, after Dr. Chapman had recommended the use of a medicine as emanating from Dr. Physick, to hear Dr. Coxe, a day or two afterward, taking especial pains to tell us that the remedy had been used from the time of Galen or Celsus. Dr. Hare, who never failed in an experiment before the class, had great hesitation in explaining the *rationale*, not having the gift of fluent speech. He gave an excellent demonstrative course on chemistry, particularly on the subjects of heat, magnetism, electricity and galvanism, which since his day have excited the attention of the whole civilized world. Dr. Hare was a large man, of great muscular physique, but possessing the manners and feelings of a courteous gentleman.

Dr. Gibson, whom I have referred to as coming from Baltimore, where he had acquired great reputation as a surgeon, had been a pupil of the celebrated Charles Bell, of London. At first, he read his lectures, which rendered him somewhat unpopular with the class, as his predecessor, Dr. Physick, had always lectured extemporaneously. Being told of this, it was said that he afterward committed his lectures to memory.

At the time of my attendance upon lectures, there were very few boards of examiners, and the graduating classes were generally divided into "quizzing clubs" of six students, each of whom took notes at the lectures of the different professors. We examined each other twice a week on the lectures of the three preceding days, and recapitulated on Sunday afternoon; having been told by Dr. Wistar that we could not spend Sunday more profitably than in the dissecting room. So Galen ends his book, *De usu Partium Corporis Humani*, by saying, it is an *epodos*, or a song sung standing before the altars of the gods, *Hymnis deos celebrantes*. The result of these frequent examinations was, that although we had some lazy fellows among us, every member of our class received his diploma.

With the garrulity, and may I not call it, the privilege, of your oldest brother, I present you with some of the reminiscences of my college life. Before I close this address, let me briefly call your attention to some other subjects, which, in my opinion, are of pressing importance.

Let me impress upon the mind of every member of the profession, the necessity of strict and undivided attention to the duties of his high calling. Let no outside influence operate to interfere with these duties. When you undertake the case of a patient, your whole duty belongs to him. The intermission of a single

visit, which on your part may have been devoted to pleasure, may sacrifice the life of your patient.

Above all things, ever strive to maintain the honor of the profession. Let no selfish or mercenary consideration deter you from observing the laws laid down in our noble Code of Medical Ethics. Cultivate friendly relations with your local medical brethren, more particularly the younger; and regulate your intercourse with all men in such a way as to cast no stain upon the honor of the profession, which is in your keeping.

In my day, previous to the establishment of medical societies throughout the country, and the organization of the American Medical Association, and the general adoption of the Code of Ethics, I saw many disastrous effects from the want of brotherly consideration and kindness. The medical men of that day were often in difficulties, patients would be taken from one physician to another without ceremony; and so great was the jealousy existing between them that for more than twenty years after my graduation, it was impossible to form a medical society in my native city and county, because there were so many aspirants for the honors. Here let me speak of some of the difficulties I had to encounter in my early professional life. Instead of being taken by the hand by the older physicians, every obstacle was thrown in my path—consultations were refused, and the treatment of my patients unfavorably criticized.

By the establishment of medical societies, and the adoption of the Code of Ethics, a wonderful change has been effected. We now feel it our duty to sustain our younger brethren, to treat them with courtesy and kindness, to save them from their errors, and encourage them in all their good work. Had the adoption of the Code of Ethics no other result than this, it would have been an invaluable blessing to the profession. But it has accomplished more. It has put the seal of condemnation upon all "isms," and developed an *esprit de corps* that has enlarged the boundaries of our science, and greatly increased the usefulness and social standing of the profession.

Now, gentlemen, being aware that reports and papers upon every important topic connected with the different departments of medicine will be presented by the chairmen of the sections, and by individual members, I have not entered upon the discussion of any subject, either medical or surgical.

Our meetings are for the purpose of promoting social intercourse, as well as for the advancement of medical science; but we should devote sufficient time to the discussion of the various subjects presented to us, and not allow them to be too greatly interfered with by social entertainments.

One word more, and I have done, and I say it chiefly as a word of encouragement to the younger among you. At the close of a long life, one devoted unreservedly to the study and practice of medicine, I will say that notwithstanding its uncertainties, its fatigues, its anxieties, its bitter disappointments, I am completely satisfied that in no other career can a man more fully accomplish his whole duty to God and to his fellow-men; so that when life here is ended, it can truly be said of him, as—be it said with all reverence —was said of Him whom we should all imitate, *pertransivit benefaciendo*—he went about doing good. Trusting that our proceedings may be both harmonious and profitable to us all; and thanking you again for the honor you have conferred upon me, I sincerely hope that the recollections we shall carry home with us will be both agreeable and lasting.

TONSILLOTOMY WITHOUT HÆMORRHAGE.

BY W. C. JARVIS, M.D., OF NEW YORK.

[Read to the Section on Ophthalmology, Otology and Laryngology.]

The question of hæmorrhage after the excision of enlarged tonsils is still unsettled, and no single method for their removal is universally approved. Those looking to others for advice as to the dangers of the operation, must be bewildered by the extreme difference in opinion held by experts on this subject. There are those who, advocating the ideas of Schmidt and his sympathizers, discourage the use of all sharp instruments as dangerous to life; others, however, accepting the views of MacKenzie, insist upon the indiscriminate removal of enlarged tonsils by the knife. Safety, as we might expect, lies between the two extremes. Experience directed my attention to a middle course, and results demonstrated its advisability. My conclusions, with the reasons for forming them, the following cases will briefly explain:

Case 1. A laboring man of powerful build, and in the apparent possession of perfect health, consulted me on account of eighteen years' discomfort in breathing and deglutition. The cause of the difficulty was an exceedingly enlarged tonsil. Finding it impossible on account of its size to ring it with the tonsillotome, I procured a piece of perforated sheet brass, fenestrated to fit the tonsil. The growth was then readily ringed, and I shaved off the projecting mass with a guarded bistouri and scissors. Profuse hæmorrhage followed section of the growth, and a persistent oozing of blood continued for more than three hours. Our failure to control the hæmorrhage in spite of the many measures employed was accounted for by the large area of the bleeding surface. The pulse became exceedingly weak and signs of serious exsanguination occurred, when suddenly and mysteriously the hæmorrhage ceased. The critical point reached by the loss of much blood in so powerful an individual, would, I believe, have been extremely serious if not fatal to a person of ordinary strength.

This history is by no means unique for the literature of the subject furnishes abundant evidence of similar experiences. The lesson taught was not disregarded, and I have selected the history of a single case as best illustrating its value:

A patient, aged 26, consulted me for a throat trouble. According to her statement she had been afflicted for three years with periodical attacks of quinsy sore throat. Much annoyance was also caused in the intervals between the attacks by the mechanical interference of enlarged tonsils with respiration and deglutition. She consulted a senior surgeon on the house staff of Bellevue Hospital, who very properly suggested removing the tonsils. I did not learn

why he preferred scissors to the tonsillotome, but presume it was on account of the large size of the tonsils. He snipped off a portion of one of the growths, but the profuse hæmorrhage which followed prevented immediate removal of more of the mass. The first attempt, it seems, discouraged both physician and patient, and her request to leave met with but slight remonstrance.

The patient put up with the discomfort caused by the growth, until her suffering compelled her to consult a physician, who suggested the removal of both tonsils.

Using a tonsillotome, he skillfully ringed and removed a small portion of one tonsil, when, according to the doctor, blood gushed from the patient's mouth, the profuse and continuous hæmorrhage being only checked by the expenditure of much time and labor. The case was then referred to me. I found the patient's throat occupied by a remarkably enlarged tonsil. Although the fauces were roomy, but little space remained for respiration or food. The growths were paler in hue than the surrounding mucous membrane. The surface of each tonsil was roughened by numerous fine indentations. They seemed to indicate that the tonsil had undergone an irregular increase, being retarded at certain points by the fine strands of firm fibro-cellular tissue forming part of its substance. In this respect, its appearance was quite different from the familiar smooth, glandular, hypertrophied tonsil. It had the consistency of cartilage, giving a harsh, gritty sensation when pressed upon. I was reminded by these peculiarities, of my disagreeable experiences with the case already described. Her unfortunate history demonstrated the correctness of my observation. I hesitated to operate upon the patient by the usual method. Mindful of the efficiency of my écraseur in operating upon vascular tumors of the nares, I selected it as for removing the tonsils without. The right tonsil was snared with No. 5 piano wire, and severed in a line with the pillars of the fauces. More than three hours were occupied in its removal, and when the divided mass was drawn from the throat, not a drop of blood escaped from the wound, nor was the saliva even tinged with blood subsequent to the operation. The patient declared she suffered no pain, and only complained of the operation being tedious. She was away from the city for three months. On her return, I was unable, by looking directly into the throat, to discover a trace of tonsillar tissue on the side from which the growth was removed. Absorption had left a sulcus between the right faucial pillars. The patient was exhibited to the students at the University Medical College, and the left tonsil eradicated in the same manner.

I do not desire to play the part of an alarmist in discussing hœmorrhage after tonsillotomy. Nevertheless, I believe the subject demands serious attention, in view of the number of deaths recorded as resulting from the use of the knife, taken into consideration, with the natural hesitancy shown by some physicians to publish unfortunate results, which is not a mere surmise, but an inference based upon the experience of surgeons, communicated in a spirit of confidence, the question of the possibility of distinguishing between the hœmorrhagic and non-hœmorrhagic tonsil naturally suggests itself. I believe such a distinction can be made in many cases by carefully comparing the appearance of enlarged tonsils, giving diverse results when operated upon. The hard or scirrhous tonsil just described, differs in many respects from the soft or malachotic gland. The malachotic, hypertrophied tonsil has a smooth surface, is often lobulated, being soft to the touch, and is usually of a light-pink color. The scirrhous hypertrophied tonsil has a rough, irregular surface, is exceedingly compact, gives a harsh, cartilaginous sensation when touched, and has a somber hue. For the removal of the first-mentioned variety, I would give preference to the tonsillotome. Any hæmorrhage occuring while these tonsils are excised by the guillotine soon ceases. In this respect, they resemble the adenoid hypertrophies found in the vault of the pharynx. The scirrhous tonsil, on the contrary, bleeds profusely when incised. The analogy it bears in this respect to firm fibroid tumors is quite striking. My écraseur offers a safe, simple and reliable means for the removal of these dangerous tumors. I would discourage the use of all sharp instruments in operating upon scirrhous tonsils, believing the histories of serious or fatal hœmorrhages occur as a result of the indiscriminate use of the knife. I would recommend the knife for excising the smooth and somewhat compact, enlarged gland known as the hyperplastic tonsil. Indeed, a knife when it can be safely used, is to be preferred to the écraseur since it expedites the operation and only causes momentary pain. The scirrhous tonsil is often associated with a syphilitic history. The objection raised that the operation is inconvenient on account of the large expenditure of time, has been overcome by a very simple modification of my écraseur. I present to your notice this simple method of removing enlarged tonsils, as its safeness and efficiency have been tested upon a number of cases with unvarying success. You will find my distinction useful, if carefully studied. The discrimination is easily made, and must prove valuable as giving confidence to the operator.

ON THE TREATMENT OF OTORRHŒA WITH ANTISEPTIC POWDERS.

BY DR. H. GRADLE.

Although the antiseptic treatment of purulent inflammation of the middle ear has been introduced but some three years, it has now been adopted by almost all, if not all, specialists. Scarcely any number of an otological journal can be examined without finding some testimony as to its efficacy. But by the general practitioner, the method has not yet been practiced to any extent; at least, I must infer this from my own experience with the patients referred to me, and I can find a reason for it in the scant allusions to it in medical journals. Moreover, all but the most recent text-books scarcely mention it. However, this article is not merely intended to corroborate the experience of other specialists, but to describe the use of some new substances for this purpose, and an improved method of applying them, both of

which have considerably shortened the time of treatment of such cases in my hands.

The antiseptic treatment appears particularly applicable in suppurative inflammation of the middle ear. For, on account of the anatomy of the cavity, the treatment can be carried out very conveniently; while, on the other hand, without it, the conditions are especially favorable for the decomposition of pus. For we have here a cavity with numerous recesses in which the pus can stagnate, where it is kept warm and fluid, and where the air can reach it to deposit in it all floating germs. In order to counteract these noxious influences, the ear, after cleansing, is filled with some antiseptic powder and plugged with absorbent cotton. The efficacy of any antiseptic treatment shows itself at once in deodorizing the secretion, which in most chronic cases, is very fetid. But it would be a decided mistake to seek the efficacy of an antiseptic dressing only in its power to check decomposition of the secretions. The real object is to keep out all micro-organisms, and the ideal antiseptic is the one which can, by its gradual absorption, aid the tissues in their struggle against the parasites, which have already invaded them. For the researches of Ogston,[1] and later those of Uskoff and of Orthmann, have established definitely that suppuration, unless produced by chemical irritants, is always the result of parasitic invasion of the tissues, especially by micrococci.

The treatment I advocate in this paper I have tested in fifty cases of otorrhœa, of which I have a complete record, and about the same number of instances of which I have no—or, at least, no satisfactory—notes, or which are still under treatment. The impressions made on my memory by the latter series fully corroborate what I can learn from my tabulated records. The great majority of these cases were treated by insufflation of powdered boracic acid. Since it is the object to bring the powder in contact with the mucous surface, it is best to begin with cleansing the ear thoroughly. A rubber bulb syringe with a very small nozzle saves much time and discomfort, when compared with the use of dry cotton alone, for this purpose, though after syringing I dry the parts with absorbent cotton on a probe, or cotton-holder. The boracic acid should be as finely pulverized as possible, since large crystals may irritate mechanically. With this precaution, its application never pains, though it may cause some noise in the ear. Since it is the intention to keep the inflamed surfaces covered with the powder, or its concentrated solution, the application should be repeated as often as the discharge has carried off the excess. Once a day in cases of profuse secretion up to once every four or five days, when the disease is near its end, has been found satisfactory. I have never seen any retention of pus caused by even large quantities of the powder. Formerly, I have blown the powder into the meatus through a glass tube, which is more convenient than the insufflators in the market. But, with the object of carrying the finely divided powder into all the nooks and corners, I have constructed a very simple powder bottle, through the cork of which two tubes are passed. One of these, connected with a rubber bulb, terminates in the middle of the bottle, with a fine opening. The air, blown through, whirls the powder about, and a sufficient quantity of this fine dust is carried with the current of air through the other tube, which reaches only to the lower end of the cork. Slender silver tubes, bent properly, can be attached to this outlet in order to be passed through a narrow perforation of the membrana tympani, but if the perforation be not too small, it is not necessary to introduce the tube far into the meatus. Messrs. Sharp & Smith, of this city, have lately put up these powder bottles for me in a more elegant and durable shape, and with attachments for the nares and larynx. My expectation of reaching the diseased surfaces better than formerly with the all-penetrating cloud of fine dust poured forth by this simple apparatus, has not been disappointed. When the eustachian tube is fully pervious, the patient often gets a taste of the remedy in the mouth, on blowing it into the ear. Since the apparatus is always filled, it saves much time in the treatment of a number of patients in succession. It is also of decided convenience for the treatment of other mucous surfaces; for instance, the nose, or larynx, as well as for the surgical employment of iodoform. Since I have begun using this apparatus, the average time required for the cure of otorrhœa by means of boracic acid has been decidedly lessened.

The duration of the treatment of otorrhœa varies very much. Among my recorded cases I have succeeded three times in arresting a long-standing discharge by a single application of boracic acid. The majority of patients, however, required from five to twelve applications, corresponding to eight days to three weeks time. A few have dragged along for two to four months, but in these instances the treatment was sometimes interrupted by irregularity on the part of the patient. In all my experience I have only seen one case which I had to declare incurable after several months treatment. It was a young man, who had bilateral otorrhœa since childhood (after scarlet fever), with complete loss of the membrane and the ossicles in both ears, but with very nearly normal hearing power. The very fetid discharge was diminished, but could neither be checked entirely nor deodorized by boracic acid, iodoform, tannic acid, carbolic acid, alcohol, or nitrate of silver; but, at that time, I did not yet use my present powder blowers. In all my instances the effect of boracic acid was noticeable on the first application, by lessening the discharge and generally deodorizing it. I have occasionally filled the ear with a 4 per cent. solution of carbolic acid, when boracic acid failed to disinfect it at once. But this smarts slightly, and fluids kept permanently in the ear are not as pleasant as dry powders. Moreover, with the powder blower I can accomplish just as much now with boracic acid as with carbolic acid formerly. There are, however, cases in which a foul odor persists until the cure, in spite of all antiseptic remedies. I never pronounce a patient cured until absorbent cotton at the end of a probe detects no trace of moisture in the ear. When this test is applied, relapses are not common. I have altogether known only of two instances, though,

[1] Vide "Gradle, Bacteria and the Germ Theory of Disease." (W. T. Keener, 1883.)

possibly, some may not have come to my knowledge. But relapses, improperly so called, or, rather, exacerbations of the disease, occur often, when patients discontinue the treatment prematurely.

The prognosis in the individual case, as regards the duration of treatment, is very uncertain. I know of no definite landmarks. Neither the previous duration of the disease and the character of the discharge, nor the size of the perforation and amount of destruction seem to determine the persistence of the purulent inflammation under antiseptic treatment. Even the presence of complications, like polypous growths or granulating erosions, does not necessarily prolong the time of treatment.

Of other antiseptic agents, iodoform has been much lauded by American authors, but much less so by European otologists. As long as I contented myself with simply filling the meatus with this powder, I found it quite unreliable, and never as prompt as boracic acid; but since I distribute the powder in such a state of fine subdivision over the entire surface, by means of the powder blower, its value has become more apparent to me. Yet its action is generally not as prompt as that of boracic acid, although in some few cases I have found it beneficial to substitute iodoform for other applications, when the latter had ceased to influence the disease very markedly. On the whole, I have not found the value of iodoform in otorrhœa sufficient to compensate for its odor.

The enthusiastic praise by Kocher of subnitrate of bismuth, as a substitute for iodoform in antiseptic surgery, has led me to use it in otorrhœa. Although it does not destroy the odor of the discharge as promptly as boracic acid, it lessens the secretion in a very marked manner. I have, however, employed pure bismuth but very few times, because I have found it so much more efficacious, when triturated with a one per cent. of corrosive sublimate. The addition of this powerful antiseptic does not give rise to any pain, while its quantity is too slight to endanger the patient's health. I have used this mixture now in some fifteen instances, with the most gratifying results. In three cases the cure was accomplished by a single application, while in others, still under treatment, the influence was manifested by an immediate improvement, as compared with the previous effect of boracic acid or iodoform.

The cloud of dust which can be obtained with this powder is so much more penetrating than that of boracic acid, that this explains in part its superiority over the latter agent. Besides, bismuth it is claimed by Kocher and other surgeons, diminishes directly the secretion of even aseptic wounds, which I can confirm from a limited surgical use of the bismuth and mercuric chloride mixture. While it might be difficult to prove the superiority of this antiseptic powder by my limited figures, the prompt effects which I have seen of lessening and deodorizing the discharge, and of allaying the pain in the more acute instances, have led me to discard all other insufflations but those of subnitrate of bismuth, with the addition of 1 per cent. of mercuric chloride.

I have tried insufflations of calomel a few times and found them nearly as efficient as the bismuth mixture, but have feared applying it too often on account of the personal danger in inhaling the fine mercurial dust.

Not the least advantage of the antiseptic treatment of otorrhœa is its effect on polypi. Unless these are very large, so as to fill up the cavity and prevent the entrance of the powder, or so constricted at the pedicle as to render their removal very easy, there is not much object in operating upon them. Twice have I been able to check the otorrhœa by one or several applications of boracic acid, although polypous growths were present. The latter atrophied gradually afterwards. In another case boracic acid failed to accomplish this. The bismuth and corrosive sublimate mixture I have found more efficacious in this respect in the two cases which have lately come under my treatment.

Finally, I claim for the antiseptic treatment this decided advantage, that the painful, and, indeed, dangerous, inflammatory exacerbations and complications, which under other treatment, so often annoy patient and physician, are never observed with rigid antiseptic medication.

CENTRAL MUSIC HALL, CHICAGO, ILL.

RESTORATION OF A LOST CHEEK BY A FLAP FROM THE SHOULDER.

BY EDMUND ANDREWS, M.D., LL.D.,

Professor of Clinical Surgery in Chicago Medical College.

This operation, so far as I know, is new; at least, I find no example of it among the works of reference at present accessible to me, and it is of importance as showing that for plastic operations on the side of the face one may use the shoulder freely as a source of flaps.

Case 11,707, *Andrew's Surgical Record*, May 18, 1882.—The patient was a young woman about twenty-two years of age. During the previous year she had received the discharge of a shot-gun close to her face, passing obliquely from the front backward and outward. The right cheek, from the angle of the mouth backward nearly to the ear, was torn away, stripping the jaws down to the periosteum. The teeth were not injured, but a few scales of bone afterwards exfoliated from the side of the body of the lower jaw. The masseter muscle was injured, but not torn away. At the time of the operation the parts were cicatrized, the lips were separated widely at the commissure, the upper one being adherent to the upper jaw near the ala of the nose, and the lower one to the lower maxilla an inch below, changing the mouth to a triangular opening. The molar teeth were exposed in the cavity where the cheek should have been.

I examined the forearm and the neck with the view of transplanting a flap from one of these places, but the patient was thin, and it was evident that there was not fat enough in either of these locations to supply the thick cushion torn from the cheek by the gun. Fortunately, the patient had a long and flexible neck, and the shoulder was very movable. By experiment, I found there was no difficulty in placing the wounded spot fairly against the top of the deltoid region by

flexing the neck to one side, and raising the shoulder to meet the spot where the cheek should be; at the same time, there was a tolerably thick cushion of fat covering the deltoid muscle.

I therefore made the first operation by anæsthetizing the patient, and raising a thick oval flap from the front of the deltoid two inches wide and two and a half inches long, leaving it attached by its upper end near the outer extremity of the clavicle. This flap was washed in carbolized water, and wrapped in gutta-percha tissue, and left about a week to recover the vigor of its circulation. The patient was again anæsthetized, and the circumference of the cicatrized vacuity in the face and of the flap were well refreshed with the scalpel. Bending the neck towards the flap and raising the shoulder to meet it, the flap was turned up, and without much difficulty stitched into its place, with the free end backward toward the ear. The head and shoulder were now firmly plastered together by long and broad adhesive straps, passing around the head and face and under the axilla, reinforced by bandages crossed and fastened in proper places. At the end of another week the union was established, and I separated the flap from the shoulder and released the head from its confinement. Most of the transplanted tissue retained its vitality, but a portion nearest the mouth sloughed, and eventually came away, leaving the flap deficient in size at that part. Three weeks after the final separation of the flap from the shoulder, I separated the external angles of the lips from their abnormal adhesions, placed them together so as to make a good commissure, and filled the gap between them and the flap by sliding in other tissues from above and below.

A salivary fistula from the duct of Steno still remained near the ear, which was cured by making a free route for the saliva into the mouth, and sliding a small flap over the external orifice.

The result of these tedious labors was most excellent, and the patient recovered a reasonably full and rounded cheek, and a comparative comeliness of countenance.

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MEDICAL PROGRESS.

Medical Notes on Japan. Prof. Ch. Remy (*Archives Générales de Médicine.* Paris: March, 1883) gives an interesting account, the results of his observations in Japan, in which he details, first, the mode of nourishing and raising children. They are nursed by the mother to the age of five and six years—artificial nursing is unknown—but in the second year they are given also rice, boiled in meat juice, fish and eggs. The women bear this prolonged lactation exceedingly well. They are small in figure, and their breasts before pregnancy present nothing peculiar; after pregnancy they are capable of producing an incredible amount of milk, and pathological galactorrhœa is quite common. In one case, which he saw in hospital, a young woman gave from her breasts over twelve and a half pints of milk in a day. Their diet during lactation consists of a considerable quantity of rice, herbaceous and farinaceous vegetables, fish, a great deal of tea, and certain popular drugs; forty or fifty times a day is tea made in a Japanese houshold.

This prolonged lactation may be the cause of the small degree of fecundity noticeable in the statistics; the women remain fifteen and seventeen months without menstruating. There are seldom more than three or four children from one mother in the family. The children are very healthy looking, and escape the gastronomical disorders. Nevertheless the mortality is very great, and they succumb principally to chest and head troubles. Hydrocephalus is very common, but rachitis does not exist in Japan.

The new-born child is not placed in swaddling-clothes; its only bandage is that around the umbilicus, and the children of the poor are frequently almost naked summer and winter. When they are dressed they wear robes with very large sleeves, open in front, and gathered around the waist by a belt, leaving naked the upper part of the body and thorax, and uncovering the legs in many instances. This is a very insufficient protection against the cold, for which the houses are poorly provided. The child's head is sometimes covered by a little red bonnet, but most generally remains uncovered, and is close shaven. It is carried on the back of the mother, between the folds of her garments, and held in place by a band, so that while the lower part of the body receives the maternal warmth, the head and superior portion of the trunk remain exposed nearly naked to the changes of the temperature. It lives in this way, on the back of a carrier, almost until it is large enough to in turn take a younger child upon its own back. This mode of carrying children sometimes produces deformities, and is, therefore, described. The women wear a large sash over their clothing which, after four or five turns around the body, is tied in voluminous knot over the loins; over the shoulder is placed a loose garment, with sleeves, and open in front. The child is placed within the folds of this latter; is seated just above the knot of the sash, its legs about the body of the mother, and its belly against her back; then she folds this garment across her chest. The band which retains the child in position is made of thick stuff in folds, and so arranged as to pass under the buttocks of the child, then diagonally across the chest of the mother to the left shoulder, then across the back, and under the two arms of the child, to pass over the right shoulder of the mother, the two extremities being knotted together and forming a figure 8 over her chest. This frequently results in a lateral depression of the sides and a corresponding projection forwards of the sternum, which is frequently bent at one of its articulations, not at all resembling rachitis, but due to the pressure of that part of the bandage which passes under the arms and compresses the sides; in most cases, as pressure is relieved and age advances, the deformity disappears.

The mode of shaving the head, which is gradually allowed to grow hair as a tonsure, exposes the uncovered part to the rays of the sun, which are very powerful in their heat even in winter. It certainly

is a protection against that dirt which is so often the origin of impetiginous eruptions and of glandular engorgements; in the older children, when the hair is allowed to grow more freely, these affections become more common. Remarkable for the roundness of their faces, their limbs in contrast are very slender, and this difference prevails in adult life.

With the girls, menstruation is established at fourteen or fifteen in a perfectly natural manner; they are generally married at a very early age, and thus escape those troubles of nutrition and innervation, as chlorosis and hysteria. Tuberculosis is hereditary, or acquired, affecting all ages. There is a marked want of proper exercise. The buildings are not well adapted to keep out the cold; they are heated simply by braziers, and the dress is but a poor protection. The chemise is extremely rare, a simple piece of stuff being worn around the waist and half way down the thighs; buttons are unknown, the robe being simply crossed in front, leaving uncovered the upper part of the chest, and at each movement a part of the legs. The men sometimes wear cotton drawers. The women, in the country, wear a somewhat similar garment; in the city, their legs are naked, a simple linen sock covers the foot to the ankle. The air penetrates to the skin through the wide sleeves.

Dr. Baelz, in 1877, discovered a parasite—the *Distoma pulmonale*—which makes the periphery of the lungs its habitat, forming a cavity connecting with the neighboring bronchi by minute openings, and producing a constant cough and recurring hæmoptysis. The egg of this parasite is studied quite satisfactorily in the sputa. With this hæmoptysis the health seems to be well preserved, and there is an absence of thoracic signs corresponding to tuberculosis. The parasite itself has been but rarely studied owing to the difficulties of making post-mortems, the religious belief of the Japanese being strongly opposed to it. Cobbold describes it as found in the island of Formosa, under the name of *Distoma ringeri*.

Dr. Baelz also describes two parasites peculiar to the liver, *Distoma endemicumhepatis* and *Distoma innocuumhepatis*. The first occupies the vesicular walls, or is free in the biliary canals; it produces inflammasion, enlargement, cachexia and dropsy. This parasite is limited to those regions where the water drank passes through the rice fields. The second variety is sometimes found in great quantities in the biliary passages, but without apparent effect.

As regards the nervous system, there is a singular insensibility to temperature; the courier will travel with naked legs at 24° F., while the baths are habitually heated to 122° F. There is, also, an apparent insensibility to pain, which is the result of education, a stoical or Spartan philosophy. The Japanese, however, have a great tendency to collapse, and it is difficult to arouse the nervous system during convalescence. There is a remarkably large number of blind persons in Japan; the result of hydrocephalus, syphilis, small-pox, and badly-treated conjunctivitis. One common cause of mental derangement is the readiness in which divorces are obtained, and the women subjected to humiliation and reduced to misery.

The small-pox has made terrible ravages in Japan, and vaccination has proved most efficacious. It is now obligatory, and the government in 1874 established a vaccine farm, which is carefully supervised. In 1824 Von Siebold first practiced this method in Japan, in a limited space and at a considerable risk to himself, not being supported by the authorities. After his departure, the virus was taken from arm to arm, lost its efficacy, and fell into disuse. In 1848 a terrible epidemic ravaged the country, and in 1849 Mohnike recommenced to vaccinate. He was supported by the government, and used fresh lymph from Java; but after his departure the arm to arm process was again put into practice, and again all confidence was lost. Now, since the appearance of the United States squadron under Perry, in the Japanese waters, the former strict objections to foreign customs have been relaxed, and Japanese physicians, who have studied with the Dutch, reorganized permanently the system of vaccination.

A CASE OF CONTINUOUS FLOW OF MILK. — Dr. Gomez Pamo, gives, in the *Anales de Cirugia*, in *La Revista de Ciencias Medicas*, in Barcelona, the following:

A woman, married at sixteen years of age, whose menses, established at fourteen years, continued without interruption until the first month of marriage, when she became pregnant. After delivery, lactation was established, and continued for twelve months, without any appearance of the menses. Becoming again pregnant, she weaned her child; and this repeated itself *fourteen* times, without any complication. She nursed each of her fourteen children up to the time that she felt herself again pregnant. During her pregnancies the flow of milk diminished somewhat, bnt never disappeared entirely. Immediately after delivery, she gave the breast to the infant. The milk was abundant and of good quality. All the children were very robust, two of them having been born prematurely. During all this time, that is, from the first month after marriage to the present, seven years after the birth of the last child, the menses have not reappeared. She weaned her last child five years since, but the flow of milk has not diminished, in spite of all treatment; it is abundant and of good quality, and the breasts have to be drawn frequently to relieve the pain caused by tension.

The woman is robust, muscular, intelligent, of a nervous temperament and of a lively character, occupied in housekeeping.—(*Journal d' Accouchements.*) *Archives de Tocologie des Maladie des Femmes*, March, 1883.

STRAMONIUM POISONING.—Dr. H. T. O. Morsly, the French sanitary physician at Mecca, in the *Alger Medical* for May, describes briefly twelve cases of poisoning by the datura stramonium, or, as the Arabs call it, tartora. It seems that in Mecca, the grocers are also physicians and apothecaries, and that this drug is most commonly used as a poison. At the time of the pilgrimage to Mecca, when some 100,000 individuals from all parts of the world crowd into the city, the criminal portion of the inhabitants use the drug, by enticing the stranger to eat with them; they

serve up, cooked with the food, the leaves, root, stem or grains of the datura stramonium. When the poison begins to work, they rob them, and leave them in delirium or coma. October 18, 1882, five days before the pilgrim celebration, Dr. M. visited the Turkish hospital at Mecca, where he found six persons from Morocco, completely under the influence of violent delirium, and presenting all the symptoms of intoxication from a stupefying poison; dilatation of the pupils; dryness of the throat and mouth; involuntary movements of deglutition, and a constant movement of the jaws; ardent thirst, with dysphagia; pulse and respiration accelerated; temperature slightly elevated; pain in the head, with movements; carphologia; the legs vacillating, bending, and not able to support the patient, who appeared to be drunk. The voice was hoarse; sometimes complete aphonia, and with one imitating the various cries of animals. The movements of the heart were intermittent, sometimes suspended, and seemed about to bring on the syncope which precedes death.

The next day, he found that six more among the pilgrims were attacked; two of them had to be carried on litters, while the remaining four walked staggering along, vociferating unintelligible words.

Two days after, when visiting these twelve cases of poisoning, to whom emetics, cathartics, and strong infusions of coffee had been given, he found them as calm as possible; they had no knowledge of what had passed, were very much mystified at finding themselves in a strange place, and at being asked questions upon matters concerning which they were entirely ignorant. Several of them still suffered slightly from mydriasis. Of 51 cases of poisoning by this drug collected in one year at the Bombay Hospital by Dr. Girard, only one terminated fatally, and only four presented very alarming symptoms.

Forcible Digital Dilatation of the Pylorus for Cicatricial Stenosis.—Prof. P. Loreta, of the University of Bologna, has operated successfully on two cases, as reported by Dr. A. Hubert (from *de Med. Bruxells*, April, 1883).

The first case was a guard on the railroad, aged forty-seven; not addicted to excess of any kind. In 1868 he suffered from disordered digestion, obstinate vomiting and epigastric pains. This was relieved by the use of the milk cure, but in 1875 he suffered from hæmatemesis to such an extent that he was nourished for a time entirely by nutritive enemata. Again relieved, in 1878 he suffered from an intense and fixed pain in the epigastric region, with incessant vomiting of bloody alimentary substances. The diagnosis of ulcer of the pylorus was made; relief came after three months' treatment by the milk cure. In 1882, after suffering for some time from the old pain, acid eructations, pyrosis and vomiting, he entered the hospital, and September 13 could no longer retain anything on the stomach. Milk alone was kept down for ten or fifteen minutes, but was then vomited, and the patient himself observed an obstacle in the right hypochondriac region, which prevented the passage of food. Examination of the abdomen by inspection and percussion showed the lower border of the stomach on a level with the umbilicus, and a diagnosis of cicatricial stenosis of the pylorus, the result of ulcer, was made.

September 14, the operation was performed in a small room, at the temperature of 77° F., with antiseptic precautions. After emptying the stomach by the stomach-pump, the surgeon made his incision into the walls of the abdomen on the right side, parallel with the costal arch, and about a third of an inch below, to the length of about six inches. He drew the stomach through the wound and opened it. Introducing the index finger of the right hand, he found that he could but with great difficulty pass it through the pyloric orifice. After much time and labor, he forced both index fingers through the opening, and then practiced forcible dilatation, as is done with the anus, until he felt the pylorus yield to the pressure. The resistance offered by the pylorus seemed to be due to a fibrous hardness, and the muscular fibers seemed to be considerably hypertrophied. He was enabled to separate the two fingers to a distance of three inches; they had been bathed in a carbolized solution before their introduction, and on removal showed nothing peculiar. He applied the silk suture to the stomach, returned it, and closed the abdominal wound by the interrupted silver suture, using Lister's dressings. The operation took thirty minutes to perform.

The patient suffered no pain, but desired food. He was given, besides pieces of ice, the yolk of an egg in wine. He had neither fever, hiccough, nausea or vomiting, but some eructation. The dressings were renewed twice. On the sixth day, two of the sutures were removed, and the wound was found in good condition, with, for the greater part, union by the first intention. On the eleventh day, the seven remaining sutures were removed. Since the operation, the patient has never experienced any pain in the stomach, except one day after soda biscuit had been given to him. His appetite was always good; the third day, he ate some chicken, and drank some wine; the sixth day, bread was added, and the eighth beefsteak, and from that time on, his daily ration comprised beefsteak, two pieces of chicken, bread, and a moderate quantity of wine. His cure was complete on the fifteenth day. Before the operation, September 12, he weighed 117 lbs. On October 12 he weighed 162 lbs. The last news from him, January 10, was that he continued to enjoy perfect health.

The second case was that of a young man of eighteen. In 1876 he ate immoderately of bread, was taken with copious vomitings, and discharged the food he had taken, already somewhat altered. The following week this was repeated twice, and for two years this continued every week. Once only, in 1878, a slight hæmatemesis followed the efforts at vomiting, and at that time vomiting occurred four or five times a week, with obstinate constipation. This condition of things increased until December 17, 1882, when he came under the notice of Prof. Loreta. For three years he could take no fruit, as it disturbed the stomach. At this time, much emaciated, nearly every day, for hours of the ingestion of food, vomiting occurred, leaving him with a ravenous appetite.

It was preceded for two hours by bitter eructations, intense thirst, a sense of weight in the epigastrium-borborygmus, and vermicular movements in the stomach, which commenced at the greater pouch, passed to the pyloric portion, were arrested, and recommenced returning to the starting point. On physical examination, the stomach, when nearly empty, exhibited in profile a tumefaction on a level with the costal arch, and corresponding to the inferior parasternal and mamillary lines, occupying the whole of the epigastric region, extending below to within two finger breadths of the umbilicus in the median line, in the left hypochondriac region, near to the mamillary line. When the stomach was filled with food, the tumefaction was much greater; its lower limit was increased about an inch. Then the vermicular movements extended from the left to the right region of the stomach, forming very marked protuberances, and evidently arrested for a longer time at the right hypochondrium than at the left. The median line of the stomach seemed to form a furrow which intercepted these protuberances and prevented their complete development in that region. The diagnosis was made of *stenosis of the pylorus* due to the formation of submucus exudations and accompanied with dilatation of the stomach.

On December 22, 1882, the operation was performed with the use of chloroform, and the most scrupulous antiseptic precautions. An incision of nearly six inches was made through the abdominal wall, about an inch and a half below the right costal arch, and nearly parallel with it. After carefully providing against hæmorrhage, the peritoneum was cut through, and a search made in the abdominal cavity for the pyloric region, which, on account of the dilatation of the stomach, had been crowded against the vertebral column. Seizing a fold of that region with the fingers, it was given to an assistant, and an incision made through the wall of the stomach nearly six inches, and in a direction oblique to that of the wound in the abdomen. Introducing the thumb and index finger of the right hand into the stomach, two plumb stones were withdrawn, which were pressing against the pyloric orifice, the edges of which were much thickened, and the orfice narrowed. These plum stones, according to the patient, had been there for three years. After several attempts, first the index finger of the right, then that of the left hand, were introduced, and with the use of considerable force, the orfice was dilated to the extent of about two inches, until the fingers felt a peculiar crackle from the torn tissue. The walls of this greatly-dilated stomach were normal, with a fine healthy rose tint. The lips of the wound in the stomach were united by eight sutures, and the abdominal cavity closed by ten metallic interrupted sutures, while antiseptic dressings were applied.

After the operation, the patient progressed satisfactorily; there was no fever, the number of pulsations and of respirations, which were slightly augmented during the operation soon became normal; on the day succeeding the operation, the patient desiring food was given a pint of milk and a small quantity of egg beaten up with wine, and he digested this perfectly. The third day he took beef soup, with two eggs; notwithstanding the daily increase of diet, on the sixth day his hunger was so great that he was allowed in addition to eat chicken, and on the eighth day he digested readily a beefsteak and some chicken with bread, and drank a pint of milk and nearly a pint of wine. During the first few days enemata were used, producing liquid stools, but they soon became of a proper consistency, and passed without the aid of medicine. The first dressing was not removed until the sixth day. The wound was found in excellent condition; on the ninth day the second dressing was removed, when the metallic sutures were withdrawn, and adhesion was perfect. From this time dressings of iodoform were used until the nineteenth day, when cicatrization was complete. The thirty-fourth day after the operation, the patient was in excellent health in every respect.

DISPLACEMENT OF THE HEART BY VIOLENCE, WITH DISLOCATION OF THE CLAVICLE AND OF THREE RIBS FROM THEIR CARTILAGES.—September 11, 1882, p. 7 T. P., æt. 19, as injured by the fall of a wall against which some iron was stacked; admitted into Wolverhampton and Staffordshire Hospital, suffering from the following injuries: The sternal end of the left clavicle was dislocated upwards, forwards and inwards, dragging the clavicular portion of the sterno-mastoid in front of the sternal portion. The third, fourth, and fifth left ribs were separated from their cartilages, and on the front of the chest their extremities formed prominences, over which the skin was tightly stretched. The heart was displaced, downwards and to the left, and there was a diffused impulse in the fifth and sixth spaces external to the nipple.

The action of the heart was tumultuous, dyspnœa, anxious expression, hands and feet cold, trace of albumen in urine. The clavicle was reduced with ease; ribs partially replaced. Six months later the left cavicle was loosely attached to the sternum, and the left shoulder had fallen slightly. At the junction of the third, fourth and fifth left ribs, with their cartilages there were palpable prominences. The heart was still displaced downwards and towards the left, and there was a diffuse cardiac impulse below and outside the nipple. The patient had a little pain in the region of the heart, and said that "it catches him like a stitch if he walks fast." Exertion caused palpitation and dyspnœa, but a distended stomach, which at first increased the severity of the chest symptoms, no longer seemed to cause discomfort.—*Dr. W. H. T. Winter in Dublin Jour. Med. Science, May, 1883.*

THE EFFECTS OF TOBACCO SMOKING IN CHILDREN.—Dr. G. Decaisne, in a paper read before the Paris Société de Médicine Publique, gives observations upon thirty-eight children, between nine and fifteen years of age, where decided effects were produced in twenty-seven.

Twenty-two had disturbances of the circulation, bruit de souffle in the carotids, palpitation of the heart, difficulty in digestion, indolent intelligence and a decided taste for strong drinks.

Thirteen had an intermittent pulse.

Eight showed a notable diminution of blood corpuscles.

Twelve had frequent attacks of nosebleed.

Ten were restless in their sleep with nightmares.

Two showed slight ulcerations of the buccal membrane, which disappeared promptly on their giving up smoking for a few days.

In one case pulmonary phthisis seemed to have resulted from a profound alteration of the blood due to the long continued use of tobacco.

In eleven children who gave up smoking entirely, with six these symptoms disappeared in less than six months; three still suffered in a minor degree at the end of a year.

He concludes, as the result of his observations collected through twenty years, that the pernicious effects of smoking upon children are incontestable. That it produces intermittence of the pulse, alteration of the blood, and the principal symptoms of chloro-anæmia, pallor of the countenance, emaciation, bruit de souffle in the carotids, palpitation of the heart, diminution of the normal quantity of the blood corpuscles, and difficulties of digestion. That the mental faculties become sluggish, with a fondness for strong drinks. That the ordinary treatment for chloro-anæmia produces no effect while the habit continues, and, finally, that with those children who are without organic lesion, all these disorders disappear promptly and without leaving any traces behind, when the habit is discontinued.—*Revue d'Hygiene, March 20, 1883.*

The Thyro-cricoid Muscle.—This muscle, known in our anatomical text books as the crico-thyroid, was given the name of thyro-cricoid by J. Casserio to accord with its functions, but Santorini (Obs. Anat. Sugd., 1739) applied the term crico-thyroid because the thyroid cartilage is more moveable than the cricoid, and this name has been adhered to down to the present day. Its anatomical relations have been well studied, but its physiological action has not been properly appreciated, if we accept the researches of Dr. Martel, as given in the *Archives de Physiologie*, Paris, March 15, 1883. He finds in phonation first the action of the thyro-arytenoid muscles in bringing the arytenoid cartileges together, the vocal apophyses touching each other, and the vocal cords, while approximating each other, still leaving a fusiform space between them, thus making the thyro-arytenoid muscle *the preparatory muscle to phonation.* Second, in order to produce the sounds of the gamut, a factor must be introduced which will vary at will the length, size and tension of the vocal organ, which he finds in the thyro-cricoid muscle as *the phonator muscle par excellence.* To support this he performs experiments which prove conclusively, to his mind, that the cricoid alone in the mobile cartilege. He places two light pieces of copper, armed with pens for registering on the Marez cylinder, one on the middle portion of the anterior surface of the thyroid cartilage, and the other on the inferior border of the cricoid cartilage, and the consequent registration shows that during respiration both cartilages, remain motionless; in forced respiration, both cartilages become elevated in unison; in phonation the cricoid alone is elevated, which becomes more decided as the note is higher in pitch. In support of this he cites Songet's experiments of paralysis of the muscle in question by division of the external laryngeal nerve, experiments which, repeated by Rochefontaine in the dog, have produced the same result, i. e., hoarseness of voice, which was relieved by using the fingers to replace the muscles; and by bringing the cricoid in closer approximation to the thyroid, the animal was enabled to make sounds higher in pitch.

Women suffering from hysterical aphonia are nearly all affected with paralysis of the thyro-cricoid. Its superficial position accounts for its being readily influenced when one "catches cold," and for its ready response to the use of electricity in relieving aphonia. He concludes:

1st. That the thyro-cricoid muscle is the phonator muscle par excellence; that it is the muscle of the singer, of the orator; that its duty is to regulate, by its contraction, the length the size and the tension of the membranous stop or pipe.

2d. That the paralysis of this muscle produces aphonia or hoarseness of the voice; that is to say, an impossibility on the part of the patient to emit any other than the lowest notes; and that this paralysis is characterized by a fusiform appearance of the glottis in the efforts at phonation.

Bi-Chromate of Potash Poisoning.—A young man æt. twenty-two swallowed a lump of chrome (the purified salt) in the solid form, equal in weight to ℥ij; then took a fifteen minutes walk, at the end of which time he felt lightness in head; great heat in stomach; glow of heat all over body, followed by a cold sweat; nausea; free vomiting; agonizing pain in epigastric region; giddiness; specks before the eyes and loss of power of the legs (complete power in arms); intense thirst; rigors and coldness of the whole body. He was taken to hospital, and seen within two hours after swallowing the poison. Pupils slightly dilated; face pale and extremely cold; pulse feeble and fluttering; no vomiting, but intense pain over stomach and great depression; no cramps or diarrhœa; a degree of stupor, but answers questions fairly well. Sensibility to touch and pain well-marked.

Treatment.—A full dose of sulphate of zinc; washing out the stomach with tepid water by means of the stomach-pump till the fluid was colorless; subcutaneous injections of 20 m. sulphuric ether. Covered with warm blankets; hot bottles to feet and sides; mustard over stomach. Gave tepid coffee, diluted with milk and with a good deal of brown sugar—rejected at once. Then gave milk mixed with lime-water, and ten grains of nitrate of bismuth; this was retained. Barley water was given as a drink, and the patient was ordered a milk diet with lime-water. He took the poison at 5 P. M., and received his medical treatment first at 7 P. M.; slept fairly well that night, and in the morning every symptom had disappeared, except a slight soreness of the mouth. Perfect recovery. The fact of having taken food about an hour and a half before taking the poison, and of vomiting

part so early, aided materially in bringing about the favorable result. The urine was examined with nitrate of silver, acetate of lead and sulphuretted hydrogen, without results. Bichromate of potash affects workmen engaged in dyeing by acting as a caustic to slight abrasions of the skin, producing a tough slough, followed by an ulcer with hardened, cup-like border. They may gradually extend deeper and deeper, until they eat their way into the bone. Attacks of conjunctivitis are also of not uncommon occurrence.

Brief of notes of Edward Orr Macniven, M.B., *Glasgow Med. Jour.*, May, 1883.

ATROPHY OF THE BRAIN FOLLOWING THE AMPUTATION OF A LIMB.—M. Bourdon reports a case to the Paris Academy of Medicine (*Seance du Mai* 5, 1883), in an old soldier, who at forty years lost his left arm, and who died at the age of seventy-three from cerebral meningitis. The brain was carefully examined, and the results are carefully given, with a summary that demonstrates, in addition to six other observations by the same reporter, that the amputation or arrest of development of a limb, produces consecutively an atrophy of the motor zone of the brain, both anterior and posterior to the fissure of Rolando. It proves, further, that the lesion consequent upon functional defects, and ordinarily confined to the cerebral cortex, can extend secondarily to the white substance subjacent to the corpora striata, to the optic thalami, and to the lateral portion of the medulla. In this case, paralysis of the left leg came on gradually in the later years of life, without any accompanying cerebral symptoms, which was attributed to an extension of the atrophy of the brain, favored, perhaps, by the advanced age of the patient, as cerebral atrophy is such a common alteration among old people.

AN ELECTRIC LIGHT FOR MEDICAL USES. — Dr. Nelot, of Rouen, exhibited before the Academy of Medicine, Paris, a so-called photophone constructed by M. Trouvé, consisting of an electric light enclosed in a metal cylinder, between a reflector with condensing lens, which, being very small and light, can be worn on the forehead like the mirror of the laryngoscopist, or fixed upon an upright placed on the table, arm of a chair, or other convenient point of steady support. The light is very strong, and is derived from a pile of supersaturated bichromate of potash. It can be used for several hours without renewal.—*Journal de Médicine et de Chir. Prat.*, Paris, Mai, 1883.

THE RELATIONS OF MONOPLEGIA OF THE LOWER EXTREMITIES WITH LESIONS OF THE PARACENTRAL LOBULE.—Dr. Ballet, in the *Archives de Neuralogie* (June 15, 1883), gives the notes of four cases—the first, æt 29 years, of a monoplegia of the left leg, of three months standing, where the left arm became gradually involved, and, on post mortem examination, the lesion was found to be on a level with and bordering upon the lobule paracentral, consisting of a tuberculous infiltration which penetrated the gray substance and involved the white matter. One important symptom in this case was the *absolute integrity* of general and special sensibility.

The second, in an old person, was a case of monoplegia of the left lower leg, with simply a gelatinous consistence to the paracentral lobule.

The third, æt 27, was monoplegia of the left leg, followed by the involving of the left arm, and resulting in hemiplegia in a case of pulmonary tuberculosis. The lesion here was more extensive, but also involved the paracentral lobule.

The fourth case was one reported by M. Jean, March 17, 1882, to the *Sve Anatomique*: There existed monoplegia of the right leg, with as a lesion tubercular meningitis, with adhesions to the left paracentral lobule.

A NOVEL MODE OF CLEANSING THE VAULT OF THE PHARYNX.—Dr. John O. Roe in the *Medical Record* (June 9th) describes a case of chronic nasal catarrh, where the mucous discharge becoming dried down, the patient removed the crusts readily with the tip of his tongue from the posterior nares and vault of the pharynx. If a probe was passed through the nostrils to their posterior opening and further, he could throw it forward nearly out of the nostrils, by passing his long and rather slender tongue up behind the palate and out of sight.

DESTRUCTIVE DISEASE OF THE KIDNEYS FOLLOWING URETHRAL STRICTURE.—Case 1: J. B. White, æt. 26, seen first May 6, 1883, when he suffered from retention of the urine. Largest sized catheter that could be used was No. 4 English, which evacuated between two and three ounces of bloody urine mixed with pus. The patient had worked to date, but had for months been complaining. The urine was ammoniacal with alkaline reaction and highly albuminous. A diagnosis of surgical kidney was made, and the patient admitted to the Baltimore City Hospital. In eighteen hours time he became comatose, dying on May 8. The autopsy showed both kidneys distended like large bladders filled with fluid; of the left nearly all kidney structure proper was absorbed, of the right a little more cortical substance remained. The ureters were dilated and sacculated, at points being fully an inch in diameter; their openings into the bladder were normal. The bladder was contracted and its walls very much thickened and rugous, containing three ounces of bloody urine mixed with pus. The prostate gland contained a large abscess (two ounces of pus), which led by a sinus to the posterior inferior wall of the bladder, and also by a small fistulous canal to the perineal junction of the scrotum. The urethra was narrowed to No. 4 English, in the lower part of the spongy portion.

Case 2: B. M., colored, æt. 60, brought to the hospital comatose, April 20, 1883; died two hours after admission. No previous history. On autopsy, kidneys found with capsule adherent, larger than normal, pelvis and infundibula full of pus; cortical substance had disappeared, and its place was filled by masses of organized lymph, which was also aggregated in masses throughout the medullary portion. The ureters were dilated to four times their normal

caliber and filled with pus; walls thickened. Bladder small, walls thick and rugous, and filled with pus; in its anterior wall was an opening connected with purulent reservoirs in the connective tissue of the pelvic, scrotal, and perineal regions. Prostate gland enlarged; right lobe occupied by an abscess which communicated with the urethra through the prostatic openings. The urethra, in its anterior, two and a half inches, was contracted to the degree that only the smallest filiform bougie could be passed through; behind the stricture there were three fistulæ of small size leading outward, and the urethra was much dilated.—*Dr J. W. Chambers, in the Medical Chronicle, June 1883.*

The Arsenite of Bromine and its Use in the Treatment of Diabetes Mellitus.—Dr. R. H. Gilliford, of Alleghany, Pa. (*Medical Record*, June 9th), combines bromine with arsenious acid in the proportion of 240 parts by weight of bromine to 99 part by weight of arsenious acid; the union takes place slowly, taking many days to pass into an oily liquid, which is soluble in water and alcohol without any apparent reaction. If water is added before the union is complete, an immediate and rapid reaction takes place, with the evolution of considerable heat, water is decomposed, and a solution of hydrobromic and arsenic acid, with a little free bromine, is formed. The complete union, before the addition of water, is much less irritating to the stomach. Dr. Theodore Clemens, of Frankfort, Germany, has been using some compound of bromine and arsenic in the treatment of diabetes, and has reported great benefit from its use. The medical journals have called his remedy bromide of arsenic, but Dr. Gilliford thinks it probable that it is the arsenite of bromine.

Its use in the treatment of diabetes millitus has been followed by the most marked benefit in every case in which it has been prescribed so far, and the notes of four cases are given to sustain this statement.

The Hypodermic Use of Sulphate of Morphine—Dr. William H. Coggehall, in the *Virginia Medical Monthly* for June, 1883, gives a very thorough, useful and practical discussion of the subject. He gives:

1st. The choice of the instrument, preferring the glass-barreled syringe, covered with a fenestrated white metal incasement.

2d. Care to examine the point of the needle before using, to see that the steel or aluminum is firmly attached, it has become pulled off and left in the cellular tissues in, at least, one instance.

3d. The proper cleansing of the instrument after use, as tetanus has been induced by a rusty injecting needle. He refers to the use of carbolized oil, which can be kept in a small vial in the instrument case.

4th. Mode of preparing the injection. The prepared tablets are recommended. They are apt to become hard with age, and difficult to dissolve, but the careful warming of the solution in a silver spoon over a lamp, gas jet, or even a lighted match, will remedy this.

5th. By Magendie's solution, which can be kept good for months by the addition of one grain of salicylic acid, or two drops of pure carbolic acid to the ounce of solution. Vidal recommends the addition of twice as much chloral by weight as there is morphia, and claims that this mixture prevents the growth of confirvæ and increases the power of quieting pain.

6th. The dose he gives is from one-eighth to one-third of a grain, and considers one-eighth quite large enough for an initial dose, save in exceptional cases.

7th. The combination of morphia with atropia, one grain of atropia sulphate to one ounce of Magendie, increases the hypnotic effect, prolongs and augments the power of quieting pain, diminishes the constipating effect, and diminishes the gastric desturbance and nervous prostration, but both do produce dysuria.

8th. That the use of the injection as near the seat of pain as possible, hastens the immediate effect is considered probable, but that it is due more to the influence of the food acting upon the part than to the alkaloid; that before the local sedative caused by the presence of the fluid wears off, the general effect of the morphia is felt and thus the impression is kept up.

9th. Is there any difference as to the locality where the injection is applied in hastening the general absorption? He cites Kane to the effect that "absorbtion from the groin and inner side of the arm rank first in point of rapidity; fore-arm next, and the thick tissues of the back last."

10th. The relative innocuousness of deep and shallow injections. The only care necessary to secure its effects is to make it *sub cutaneous*. If in the skin itself phlegmasiæ are sure to follow. There are cases who cannot receive an injection into the cellular tissue without its being followed by an abscess.

11th. The necessity in some cases of producing local anæsthesia by the use of the ether spray, or of ice and salt.

12th. The relief of the urticaria, which sometimes follows injections, by fomentations of warm water and vinegar. The administration of potassium bromide just before the injection has sometimes prevented this annoying symptom.

The writer finds the thin, dark-complexioned members of the Southern or Semitic race require more morphia than the Anglo-Saxon. He gives the following description of venous absorption: First, a peculiar metallic taste in the mouth, with an aching of every carious tooth in the head, a most intense irritation and prickling all over the body and a dark-red suffusion, extreme swelling of the subcutaneous tissues, especially of the hands and face, increased heart's action, head-throbbing, followed by congestive cephalalgia, which, just before the cranial vessels appear about to burst, begins to abate and the symptoms subside. In two cases he treated, the first, a man, by stripping him to the waist, and dashing cold water over the head aud spinal column; the second, a woman, he treated by diffusible stimuli. He finds that a sharp pain felt on making the puncture, is indicative of injury to a vein.

Of the propriety of its use in albuminuria, he cites Loomis, Edes and Bartholow in its favor; and Loomis as considering that the salt counteracts the effect of the uræmic poison on the nerve centers, producing

extreme diaphoresis and facilitating the action of diuretics and cathartics, thereby becoming a powerful eliminative agent. Administered just before the commencement of the inhalation of chloroform, it notably diminishes the irritation of the air passages, and the narcosis is prolonged with a smaller quantity of the anæsthetic, while the protracted vomiting and general depression of the vital powers, sometimes occurring as sequelæ, are very materially decreased.

In this connection, the editor of the *Planet* (May 15, 1883) insists upon the importance of rubbing in the solution; that is, after the needle has been withdrawn a small white lump is left, which should be rubbed out by degrees by gentle massage over it and in its immediate neighborhood, for ten or fifteen minutes, which he claims, adds to the rapidity of absorbtion and prevents scars and markings.

VIVISECTION AT THE COLLEGE OF FRANCE.—The *Gazette Hebdomadaire* (Paris) of June 1, 1883, gives us the following account of an interesting little episode which occurred, May 22, in the amphitheater of Brown-Sequard at theCollege of France:

Towards the end of his spring course, M. Brown-Sequard had commenced a series of experimental lessons to demonstrate some new facts of which he had previously spoken, that a general analgesia, without loss of tactile sensibility, could be produced by irritating the laryngeal mucous membrane with carbonic acid or with the vapors of chloroform, taking, at the same time, precautions to prevent the entrance of these substances into the lungs. He was preparing to examine the sensibility in a little monkey, which had been subjected to a similar experiment three days previously; but a few moments before the lesson he was about to cut the suture of a wound near the larynx, when a young woman gave him a blow with her parasol on the fingers. She was requested to retire but refused, declaring that in virtue of the law of Grammont, she had the right to prevent all cruelty against an animal in a public place. The professor having recommenced his operation, the woman attempted to strike him again, but this time her parasol was taken from her before the blow was struck. A police officer was called, and she was taken before the magistrate, where a complaint was entered against her by two witnesses. She said that M. Brown-Sequard desired to cut the vocal cords to prevent the fearful cries of the poor beast. He would have been careful not to perform such an operation, as they were necessary to give him proper assurance of the presence of sensibility in the monkey, which did not cry, notwithstanding the return of that sense. The question to be determined was to learn if the analgesia produced by the carbonic acid, which in this monkey had continued for twenty-four hours after the irritation of the laryngeal mucous membrane —still continued after the lapse of three days—sensibility had returned. This incident had its counterpart, for the following week M. Brown-Sequard took for the subject of his lesson, the usefulness of vivisections. The amphitheater was too small to hold his audience, and he received no other interruptions than repeated applause and marked proofs of the most lively sympathy.

A CASE OF FATTY DIARRHŒA.—We extract the following from an article by Dr. Algeron Wolverton, in *Canada Med. and Surg. Jour.* for June:

Mrs. G., æt. 43, multipara—addicted to alcoholism—has a bloated, puffy, appearance but gradually losing flesh, complained of occasional diarrhœa. Oct. 10, diarrhœa very troublesome, four or five evacuations daily, and quite as many more during the night—said she passed a "yellow scum," which came away from her with a "gush of wind," just before her bowels were going to be moved, and which she stated floated like "grease" on what she passed in the chamber-pot. Oct. 11, the doctor saw a most noisome-smelling mixture, a yellowish, greasy looking substance, very much resembling melted beeswax, occupying half the fluid contents of the chamber-pot. When first passsed it was semi-fluid, but speedily became firmer and more consistent, and appeared in irregular-sized cakes, about a quarter of an inch in thickness, always preceded the fœcal evacuations and was accompanied with a considerable discharge of flatus; the total quantity passed in the twenty-four hours would, at least, reach ten or twelve ounces.

The total duration of this diarrhœa could not have been longer than ten or twelve days. Fat cells were found under the microscope. Mrs. G. lost weight rapidly, with nearly total loss of appetite, but gained five pounds the week after its disappearance. No great pain, some uneasiness and tenderness or pressure in the gastric region. Liver and spleen not perceptibly enlarged. Urine free from albumen or sugar. Distaste and repugnance for fats during the diarrhœa, and never fond of fatty kinds of food. No treatment.

EDITORIAL.

THE CHANGE.

At the recent meeting of the American Medical Association in Cleveland, it was decided with much unanimity to commence the publication of the proceedings and papers of the Association, in a weekly medical journal under its own control, instead of in a volume of Transactions, as heretofore. The basis on which this change has been made, and the general mode of business management, are plainly indicated in the report of the Board of Trustees, which is given in full as a part of the record of proceedings, constituting the first article in the present number of the JOURNAL. As the subject has been before the Association and reported on three years in succession, it is not necessary at present to discuss further the questions as to the advantages or disadvantages to result from such change. The important step has been taken, and this, the first number of the new form of publication, is before its readers. It contains the minutes or full record of proceedings of the general sessions of the Association during the recent annual meeting in Cleveland; the annual address of the late President, Dr. John L. Atlee, and a fair variety of other matter of interest to the profession generally. Of course, we have not yet had time to secure the

necessary regular correspondents for manning all departments properly, and with that regularity which is desirable for the highest degree of efficiency. But we shall spare neither time nor labor to complete such arrangements as will make the JOURNAL an efficient representative of the scientific, social, and ethical interests of the whole profession. Thirty-two pages of reading matter each week will make two large-sized volumes for the year. We shall consequently need many original papers and communications beside those coming through the National Association, and we specially invite favors in this direction, from those who read papers before State and local societies in all parts of the country. To our *confreres* of the medical press from whom we have received so many kind and complimentary notices, we return thanks, with a cordial proffer of the right hand of fellowship, and of our best endeavors to promote the common welfare of all.

EXCHANGES.—It is understood that nearly all the editors and publishers of medical periodicals in this country have been sending a copy of their respective publications to the Library of the American Medical Association, in the Smithsonian Institute at Washington, in exchange for the annual volume of Transactions. We earnestly desire that they should continue to send an exchange copy directly to the Library, and so many as are willing to furnish a duplicate copy, will bestow a special favor by sending it to the office of the publication of the JOURNAL, 65 Randolph street, Chicago, Illinois. The principal reason for desiring a copy of all exchange journals continued at the Library in Washington, is, that they will there be readily accessible to Dr. Wm. Lee, of that city, who has charge of the department of this journal relating to medical progress.

MEMBERSHIP DUES AND SUBSCRIPTIONS.—All members of the American Medical Association should pay the annual membership fee of five dollars to the Treasurer of the Association, R. J. Dunglison, M.D., P. O. Box 2386, Philadelphia, Pa.," the same as heretofore; and all who do so will receive the JOURNAL of the Association without further trouble on their part. Those who wish to subscribe for the JOURNAL of the Association, and are *not members*, can send the five dollars, with their post-office address, directly to the "JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 65 Randolph street, Chicago, Ill." These rules apply equally to all those who have heretofore signed pledges of support and returned the same to the president of the Board of Trustees.

A GENERAL INDEX.—We are informed, officially, that a general index of the Transactions of the Association from the date of its organization to the present time, embracing the whole series of thirty-three volumes, has been prepared by the Permanent Secretary, and is now in press. It will be ready for distribution at an early day, and all who wish to secure a copy should send *one dollar* to the Treasurer, Dr. Richard J. Dunglison, P. O. Box 2386, Philadelphia, without delay. With a full index, the value of the past series of volumes will be increased fourfold.

A FITTING APPOINTMENT.—As predicted in the letter of our Philadelphia correspondent, Dr. Theophalus Parvin, of Indianapolis, has been appointed to the chair of Obstetrics in the Jefferson Medical College, made vacant by the resignation of Prof. Wallace. Probably no more fitting appointment has been made in a medical college for many years; and we congratulate heartily all the parties concerned.

DOMESTIC CORRESPONDENCE.

PHILADELPHIA LETTER.

(FOR THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.)

One of the principal topics of conversation in medical circles here is the new JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Its importance to the profession is appreciated, and the idea that founded it, is considered an advanced one, both as regards medical journalism and scientific medical literature. A medical journal that shall be truly representative is needed. And by representative I mean a journal national in character. Such a journal, if the standard of excellence is maintained, will do much to elevate medical journalism by its competition with the periodical medical literature of the day. Although occupying a province peculiarly its own, the bounds of a journal of this character must, of necessity, overlap somewhat that of medical journalism at large.

Professor Ellerslie Wallace, who for so many years has occupied the chair of obstetrics at the Jefferson Medical College, has resigned, and the question who will be appointed to fill the vacancy is exciting no little interest. The chair is an important one, and the college national in character; therefore the trustees are looking for a man with a national reputation to fill it. Naturally they turn to the West which has already furnished a Gross and a Bartholow to the Jefferson, and to her sister college, the University of Pennsylvania, an eminent professor of chemistry; and, probably, before this goes to press, Prof. Theophilus Parvin, of Indianapolis, will be selected to take the chair. Professor Wallace was more than usually gifted as a medical teacher, and his forcible lectures have left their impression on a whole race of medical men, and it is a pleasure to know that a man of talent fully equal will succeed him.

A clinical conversational meeting of the Philadelphia County Medical Society was held at the hall, June 20, at 8 o'clock P. M.

Dr. O. H. Allis made some remarks on the diagnosis and treatment of fractures of the neck of the femur in elderly persons. He referred specially to the importance of age in making a diagnosis. He said that persons over sixty years of age rarely have dislocation, and if persons of this age fall and cannot rise, the reason most likely will be a fracture of the neck of the femur, probably intercapsular. It is his opinion that persons of seventy years of age, or over, never have a dislocation of the hip, but the

injury will, in every case, be found to be fracture of the neck of the femur. In the diagnosis he makes a point concerning the fascia lata. On the uninjured side it effectually covers the parts; but on the injured side the hand may be passed down and the head of the bone handled. This, with the usual signs, should be sufficient to complete the diagnosis without much manipulation or attempt to get crepitus. All attempts to obtain crepitus he strongly condemns.

The question, what kind of a cure can be expected, he answered by saying that a bony union cannot be hoped for. The first thing that happens in a case of fracture is constitutional disturbance. This may be very severe, and death may result from it. But as soon as this disturbance is over, if the patient survives, he should be got out of bed. These cases occurring in old people cannot stay in bed. They are apt to develop bed-sores; and they will die of the bed-sores. Therefore get them up on the third or fourth day. Never think about the kind of union you are to obtain. Treat the case as if there was no fracture whatever.

Dr. J. M. Barton said that he had been in the habit of treating his cases in the manner described, but thinks the present impression of the surgical world is to keep fractures of this kind at rest in bed, and even with splints. The question of treatment has a bearing from a medico-legal standpoint, and, as this is the opinion of so many lights in the profession, it is a question whether we are not legally responsible if we do not follow it. He does not expect to get bony union, but expects ligamentous union as short as possible. His personal belief in the matter is with Dr. Allis.

Dr. Hearn puts on extension in treating this class of fractures, as it gives patients great comfort, but thinks in very old cases Dr. Allis' plan is preferable.

Dr. Addinell Hewson said that he had in his possession a specimen of bony union in intercapsular fracture formerly belonging to his father. His father treated the case by supporting the limb with pillows, bending the knee so as to bring the fragments of the bone in juxtaposition. The use of Smith's splint, Dr. Hewson said, has cured a number of cases in his hands. The treatment should be used early in the case. He has never had as good results from extension and counter-extension as from Smith's splint.

Prof. William H. Pancoast fully agreed with Dr. Allis, about the mistake of too much manipulation for the purpose of exciting crepitus. Owing to the anatomy of the hip joint, the capsular ligament covering the whole of the neck of the femur in front, and only the upper half posteriorly, a fracture may be partly within and partly without the ligament. And as every filament of union is of value to the fracture, too much rough handling to establish crepitus might tear off some ligamentious connection. As one cannot tell exactly the character of the fracture, it is best to treat it as an intercapsular fracture, so as to give the greatest benefit of treatment. It is a good cure if short ligamentous union can be secured.

He can understand how a good result can be produced by Smith's splint. As for himself he has been in the habit for some years of treating this fracture in a triple inclined plane. It is the Charlestown reclining chair, which can be fixed at any comfortable angle by a rachet attached to the side.

Dr. Allis asked how soon the patients were put in the chair, to which Prof. Pancoast replied, at once, and they sleep in the chair, which, if it is found necessary, may be extended into a comfortable bed. In some hospital cases, however, from nervousness due to shock, they had to be placed in bed to rest a day or two. He uses, with the triple inclined plane, a splint, or pillow, on the outer aspect of the thigh, and a broad leather strap and pad around the pelvis.

Dr. Allis said that he has had as perfect results without splints as with them. One case, 80 years old, is now walking without difficulty with the aid of a cane. As there is so little chance for motion between the fragments in a fracture of this kind he sees no necessity for splints. One patient was brought to the Jefferson Hospital who had been lying for nearly a week fairly macerating in her own urine which had soaked the bed. She had frightful bed-sores, in the treatment of which she was shifted back and forth from bed to bed. Only the bed-sores were treated. The patient finally left the hospital, and subsequently died of some other affection. Post mortem in this case showed the parts closely dovetailed together in spite of the motion from the shifting which she had undergone.

Dr. Pancoast said further, at the request of the society, and spoke of the fact that fractures of the neck of the femur are more common in aged people, owing to the more rectangular relation of head and neck and shaft, and increased fragility or brittleness of the bones; except the epipheal fracture of the very young. He was opposed to the horizontal position in the treatment of this fracture, as anatomically he considered it the most unfavorable. In the horizontal position of the body the external rotators at the hip have the most power, and naturally evert the thigh as is shown by the eversion of the foot, which, at the most distant part of the lower limb, marks like an index the amount of rotation made by the leg.

Dr. Barton then exhibited a patient suffering from phthisis, in whom great improvement followed amputation, on account of necroses of carpal and metacarpal bones. After the amputation the temperature immediately went down, the night sweats disappeared, the appetite returned, and the patient gained ten pounds in flesh. Most of the constitutional disturbance was regarded as from the lung affection, but the result showed the hand to be the cause in great measure. It is a question whether the phthisis was not caused by the diseased bone.

Other things of interest have been said and done in this great medical center during the past month, but space will not permit a further account.

PHILADELPHIA, June 23, 1883. J. V. S.

WASHINGTON, D. C., July 2, 1883.

Dear Sir: Allow me to suggest to you that, with the inauguration of the medical journal, which is to be the organ of the American Medical Association,

you open your columns for the discussion of a scheme which shall have for its object the establishment of a Medical Benefit Society. We have plenty of time between now and the next annual meeting of the Association at Washington, in May, 1884, to ascertain how far such a scheme would be supported, and in what shape it would be best to put it, in order to bring it properly before the Association.

That there is a great need for such a society every medical practitioner, of any length of service, will readily acknowledge, and, while we see aid societies and insurance companies working successfully around us for special purposes and for the general public, we cannot but think it more than feasible in its execution, and that the American Medical Association as it stands to-day could best foster and insure a widespread support and sphere of usefulness to such a project.

You have an illustrious precedent in the *British Medical Journal*, which is proposing a similar society, and whose published articles on this subject have suggested this communication. The English society for the relief of widows and orphans of medical men, as reported in that journal for May 26, shows that out of a membership of only 370, nearly $15,000 had been distributed in grants in one year, and that the expenses for the year had amounted to about $900.

I have no form of organization to propose, not being sufficiently acquainted with such bodies, and, for that reason, would like to know them better and to hear a proper discussion of the subject.

Yours respectfully, M. D.

MEDICAL SOCIETY ITEMS.

MEDICAL TEACHING AND LICENSING TO PRACTICE.

At the meeting of the Chicago Medical Society, held May 7, 1883, Dr. Ephraim Ingals offered the following resolution:

"*Resolved*, That the public good would be promoted by the establishment of a State Board of Medical Examiners, such Board to be entirely separate and independent of all medical colleges, to have the exclusive right to grant license to practice medicine in the State of Illinois, leaving to medical colleges their function of teaching and conferring degrees, but obliging all who in future desire to enter upon practice, and who have not already received license to do so, to go before such Board to prove their fitness; and that said Board be required carefully to examine all applicants as to their moral, literary and medical attainments, and only to confer a license on those who are well qualified in all these respects."

It was seconded by Dr. R. E. Starkweather, who indorsed it, and stated further, that he believed a *preliminary* examination of students should be carried out by a State Board, and that the colleges should graduate a less number than they do. He hoped the colleges in this State would be the pioneers in this preliminary examination.

Dr. J. H. Hollister stated that some phases of this subject had interested him for years. Improvement, however, is being made gradually in educating students. With reference to elevating the standard of education for students before entering college, he, personally, was disinterested, but thought there should be some common standard by which students in all medical colleges in the State should be measured and examined. An Examining Board might be selected from the Illinois State Medical Society, or be appointed by the Governor. But the appointment should be given to those who are faithful to their profession, and should be regarded as of great value and involving a high degree of responsibility.

Dr. J. G. Kiernan said he had been a medical journalist for some time, and in that capacity was obliged to revise a large number of communications from physicians. Many times the spelling was poor, and he gave an instance in which a New York graduate spelled the word Emulsion, thus: "Amulsen." He thought students graduated too hurriedly.

Dr. S. Strausser thought a higher standard than the present one should be established, and cited instances where diplomas had been easily obtained, and those possessing them were illiterate and unrefined.

Dr. C. W. Purdy spoke of the merits a man must possess before graduating at the Queen's University, Ontario. In Canada there is a medical council that appoints an examining medical board, and a student is obliged to pass this board before entering a medical college, and there required to study four years before graduating. He favored a higher degree of literary attainment here, and also the resolution before the meeting.

Dr. R. Park said every physician should be required to become a licentiate, and pass an executive or State medical board. The colleges were not thorough enough here, and he would like to see a medical department attached to a State University, but doubted if ever this would be supported by the State.

Dr. G. C. Paoli detailed the methods of medical education in Stockholm, Sweden, which consists of three different degrees, and the applicants for the degree of M. D. is required to write a thesis in the Latin language, and discuss the points contained therein in the same language in the presence of the faculty. In the degree of Master of Surgery the candidate must be equally as well informed.

Dr. J. H. Etheridge thought the sample letter contained in the written report of the last quarterly meeting of the Illinois State Board of Health (as read) could not emanate from a graduate of any college in this city.

Others participated in the discussion, and upon a vote being taken, the resolution was unanimously adopted.

Dr. Ingals then offered the following:

"*Resolved*, That a committee of three be appointed by the chair to represent the Chicago Medical Society, and that they be instructed to confer with the Illinois State Board of Health, relating to statements contained in the proceedings of its last meeting; and that this society respectfully requests said Board to communicate to our committee any facts in the pos-

session of the Board that will enable the committee to prepare its report for the society."

Which was also unanimously adopted, and Drs. E. Ingals, R. G. Bogue, A. H. Foster were appointed the committee.

THE annual meeting of the Ontario Medical Association was held at Toronto June 6th and 7th. The officers for the ensuing year are: President, Dr. W. Clark, Toronto; Vice-presidents, Drs. Worthington, of Clinton, Philip, of Brantford, McGill, of Doborne, and Richardson, of Toronto; Recording Secretary, Dr. White, of Toronto; Treasurer, Dr. Graham, of Toronto; Corresponding Secretaries, Drs. Graham, of Brussels, Mackay, of Woodstock, I. H. Cameron, of Toronto, Aylesworth, of Collingwood.

The next meeting will be held at Hamilton, next June.

THE eighth annual session of the Medical Society of Arkansas was held at Little Rock May 30 and 31. The officers for the ensuing year are: President, J. M. Keller, of Garland county; Vice-presidents, Geo. Hudson, of Onachite county; J. M. Carrigan, of Hempstead county; J. F. Blackburn, of Franklin county; D. S. Mills, of Jefferson county; Secretary, L. T. Gibson, of Pulaski county; Treasurer, A. L. Breysacher, of Pulaski county; Librarian, John Waters, of Pulaski county.

Little Rock will be the next place of meeting.

THE annual meeting of the Medical Society of New Jersey was held June 12th and 13th, at Atlantic City. The attendance was unusually large. For the ensuing year the following officers were elected: President, Stephen Wicks of Orange; Vice-Presidents, P. C. Barker, of Morristown, Joseph Parrish, of Burlington, and C. J. Kipp, of Newark; Corresponding Secretary, Wm. Elmer, Jr., of Trenton; Recording Secretary, Wm. Pierson, of Orange; Treasurer, W. W. L. Phillips, of Trenton.

The next place of meeting is to be Cape May.

THE ninth annual meeting of the American Neurological Association was held in New York, June 20, 21 and 22. The following new members were elected: Dr. L. Weber, of New York; Dr. G. S. Walton, of Boston, and Dr. J. T. Eskridge, of Philadelphia.

The officers elected for the ensuing year are: President, Dr. Isaac Ott, of Easton, Pennsylvania; Vice-President, Dr. W. R. Birdsall, of New York; Secretary and Treasurer, Dr. R. W. Amidon, of New York.

THE Iowa State Medical Society held its thirty-fourth annual meeting at Council Bluffs, May 16th and 17th. Fifty new members were admitted. The officers for the ensuing year are: President, S. R. Robinson, of West Union; Vice-presidents, H. C. Huntsman of Oskaloosa and D. W. Crouse of Waterloo; Secretary, A. A. Deering, of Boone; Treasurer, G. R. Skinner, of Cedar Rapids.

Des Moines is to be the next place of meeting.

THE National Society of Microscopists will convene in Chicago in August. Committees from the Illinois State Microscopical Society, Academy of Sciences, and Chicago Medical Society have been appointed to co-operate in welcoming the former, and otherwise making this, their first meeting here, pleasant, interesting and instructive.

THE officers of the Maine Medical Association for the ensuing year are: President, O. A. How, Lewiston; Vice-presidents, L. W. Pendleton, Portland; D. E. Maroton, Monmouth; Corresponding Secretary, J. O. Webster, Augusta.

THE Chicago Medical Society has 220 resident members, twenty delegates from which attended the recent meeting of the American Medical Association in Cleveland, besides some twelve others from Chicago who are permanent members.

MISCELLANY.

COLLEGE NEWS.

AT the close of the last academic year of Johns Hopkins University, it was announced that the hospital was nearly ready to open. One feature of the building is unique: It is so arranged that the graduating class of the medical college may be lodged in the building. The last year will be almost wholly devoted to clinical work.

Drs. Remsen and Martin, who are now Professors of Chemistry and Biology in the University, are made Professors of Chemistry and Physiology, respectively, in the medical faculty. Dr. Billings, of the army, has been tendered the chair of hygiene. It is, however, somewhat doubtful whether he can accept a full professorship and still retain his position in the army.

MEDICAL DEPARTMENT UNIVERSITY OF NASHVILLE AND VANDERBILT UNIVERSITY.—At the faculty meeting of May 19, the following changes were made: Prof. Van S. Lindsley, to the chair of Diseases of the Eye and Ear; Dr. O. H. Menees, as Professor of Anatomy; Dr. C. S. Briggs, to the chair of Surgical Anatomy and Operative Surgery; Dr. C. L. Ives, as Demonstrator of Anatomy.—*Nashville Jour. Med. and Surg.*, June.

MCGILL COLLEGE OF CANADA.—Dr. J. F. Shepard has been appointed to the chair of Anatomy made vacant by the death of Prof. Scott.

THE LONG ISLAND COLLEGE HOSPITAL held its annual commencement on June 19, graduating fifty-one students.

BOOKS RECEIVED.

On the Relation of Micro-Organisms to Disease. By W. T. Belfield.

Bacteria and the Germ Theory of Disease. By H. Gradle.

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ORIGINAL ARTICLES.

ADDRESS ON THE PRESENT STATUS AND FUTURE TENDENCIES OF THE MEDICAL PROFESSION IN THE UNITED STATES, DELIVERED AT THE ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF MEDICAL EDITORS IN CLEVELAND, JUNE 5, 1883,

BY N. S. DAVIS, M. D., LL.D., PRESIDENT OF THE ASSOCIATION.

GENTLEMEN:—I have promised to occupy your attention on this occasion, in considering the present status, and future tendencies of the medical profession in the United States. There is probably no more difficult problem than that involved in the question, as to the real status and tendencies of the times in which we live; and especially in reference to communities or classes of communities of which we constitute a part. An intelligent mind furnished with all the facts of the past history of a people, or of a profession, does not find it difficult to trace the various influences and measures which have contributed to their development and progress up to a given period in the past. But our minds are so liable to be influenced by such part of the events transpiring in the present as are most nearly related to our own interests, that we find great difficulty in comprehending with equal clearness all the influences at work around us, and consequently cannot judge correctly of their future tendencies. So true is this that if we study the past history of our race, we shall find but few, even of those most eminent as statesmen, clearly comprehending either the full bearing of the measures they advocated or the tendency of the time in which they lived. And a large part of the legislation which is done, through all forms of government, is based upon only a partial comprehension of the existing evils to be remedied, or of the benefits to be obtained, and if carried into effect with still less comprehension of the effects of those laws upon the future interests of society. And what is true in regard to legislative bodies and statesmen, is equally true in regard to any particular profession or subordinate class of people. For instance, at the present time, in relation to our own profession, it is apparent upon almost every page of our medical literature, and from the discussions in every medical society, that many things exist which are far from being satisfactory either as it regards its legal standing and educational progress, or the results of strictly professional investigation. And yet, in the midst of all the complaints, how few are the instances in which even an attempt is made to point out clearly any remedies for the evils complained of that would not in their practical operation either develop other evils of equal magnitude, or utterly fail to accomplish the purposes for which they were designed. Very much has been said during the last quarter of a century in regard to the imperfections and inadequacy of our system of medical education; and yet how few have even attempted to solve the question as to why the present inadequacy exists, or to point out clearly the way for its improvement. For the purpose of studying the important subject before us I shall on this occasion ask your attention first to the question, what constitutes the status of a profession. The word status is used simply to imply the present state of being, or the present condition as a whole. But, to comprehend the actual conditions and relations of any large class in society as a whole, it is necessary to analyze the interests of that body of men, and look at each factor in its separate relations, and then when they are united we will see more clearly and distinctly the actual conditions and relations of the whole. For our purposes it is sufficient to consider the status of the profession, as comprehending its social relations, its ethical spirit or morale, its co-operative or society organizations, its educational institutions, its legal relations and its scientific activity or spirit of investigation. In regard to the first of these I know of no reasonable ground of complaint. In this country the social standing of the members of our profession is everywhere precisely what the education and qualities of the individual member make them. There are yet no such established ranks, grades, or casts of society in this country as to distinctly assign the members of any profession or calling to a special social standing. And, everywhere, both in the city and country, the enlightened and gentlemanly physician is not only a welcome visitor at the fireside, and around the bed of sickness in all grades of human society from the highest officer of the land to the lowest,—from the most wealthy to the beggar,—but he is also freely received and awarded as high a seat of honor in all social assemblies, whether merely social, literary, scientific or otherwise, as the members of any other class in the community. In the rural districts, outside of large cities, the intelligent, educated practitioner of medicine is in most instances emphatically a leader of society, and is often looked up to, not only as a leader in social affairs, but as an adviser in reference

to all the educational, literary, and hygienic interests of the district in which he lives. The ignorant and the vulgar, however, who may have obtained in some way the title of "doctor," and admission to the ranks of the profession will not find the mere name of doctor to carry him into social life, or to give him a rank beyond that which his education, habits and manners entitle him.

In regard to the ethical spirit and moral tone of the profession in this country, I think it is not only equal to that of the members of the same profession in any of the other civilized countries of the world, but in many respects, it may be regarded as superior. Receiving but little protection or fostering care from legislation, often times, in fact, being obliged to maintain their professional relations, and standing in spite of adverse laws; it is probable that another equally numerous class of men cannot be found, who more rigidly and tenaciously adhere to those rules of an ethical nature, which are calculated to protect and sustain each other on the one hand, and still more effectually to protect the interests and welfare of their patients, upon the other, than is done by the profession in this country. The rule to strictiy avoid divulging the secrets derived from confidential intercourse with families and individual patients, the disposition as a general rule, of course, admitting of some exceptions, to foster and protect the interests of each other as members of the same profession, exist in a very marked and gratifying degreee, througout almost our entire country. I will go further than this, in expressing the opinion that throughout the entire ranks of the regular profession of medicine, there is that high moral or ethical tone, which, not only nominally frowns upon and discourages all immoral practices, or the encouragement of those criminal proceedings that grow out of the vicious conduct of members of the general community, bnt which really exerts a more powerfully restraining influence than any code of penal legislation could effect. In regard to the associate or society interests of the profession, there are a number of questions of great importance to its future welfare. And these questions, like those pertaining to the educational standing, cannot be fully appreciated in their present relations, or in their future tendencies without a retrospective study of the influences and forces which have brought society organizations into existence, and which have given them their present degree of development. It is hardly a century since medical societies, assuming the shape of permanent organizations, first came into existence. In our country it is less than one hundred and fifty years since the first limited and incipient organizations of the kind were brought into existence. The first state medical society organization, of which we have any account, is that of the Medical Society of the State of New Jersey in 1760. Some local organizations in cities had existed, prior to this. A few of these survived, and maintained their organizations through the "War for Independence," and a few were organized anew during the first twenty years after that war. But soon after the commencement of the present century, the work of organizing medical societies on a permanent basis in several of the original thirteen States of this Union was commenced and carried forward with considerable degree of rapidity. The most complete, perhaps, of these organizations, was that which was effected in New York State, largely under the guidance of Drs. John Stearns, of Saratoga, Alexander Sheldon, of Montgomery, and Asa Fitch, of Washington counties. The two first named were also members of the legislature of the State of New York, and in their work of devising a complete system of medical organization for that State, and procuring its adoption by the legislature, they were greatly aided by the Hon. Samuel W. Van Ess. The act of incorporation which embraced the organization of a State Medical Society, with auxiliary county societies in every county in the state, conferring both upon the state and county societies the duty of appointing boards of censors for the examination of candidates for admission into the profession, was passed by the Legislature of that state in April, 1806. Legally organized medical societies were formed in other states with such a degree of rapidity, that all the original thirteen states, except Pennsylvania, Virginia, and North Carolina, had more or less complete state and county organizations before the end of the next twenty-five years. And as new states were added from time to time, state and local medical societies were organized in them, accompanied usually by legislation, intended not to protect the profession, but to prevent the imposition upon the community practiced by ignorant and unskillful pretenders, in nearly all of the then existing States of the Union. A careful study of the laws which were enacted during all that period, embracing the first thirty years of the present century will show that while the legislative bodies were influenced almost solely by two leading motives, one to protect the people from the effects of ignorance and imposition, and the other to encourage genuine medical education as a means of benefitting the people at large, the physicians themselves were animated by an earnest desire to carry into effect the laws enacted for those purposes, and by two other leading motives. The first, and perhaps most powerful was the desire for mutual improvement in professional knowledge and practical skill. The second, a desire for more extended mutual acquaintance and personal intercourse.

These organizations produced all the beneficial effects that had been expected from them, and perhaps in no country at any period of time, has a more rapid degree of progress been made in the educational, social, and practical interests of a profession than took place during the first quarter of the present century in our own country. And nearly, or quite all the laws that had been enacted, either for incorporating medical societies, or defining what should constitute a proper education, also included provisions against irregular practice. As might have been anticipated in a free country where the utmost liberty is enjoyed for the pursuits of man, and for exercising choice individually in every relation and aspect of society, and where all legislative bodies are made elective by direct votes of the people, it did not require more than one or two decades of the existence

of the restraints that had been thrown upon the practice of imposition and every variety of ignorance, to develop combinations of those who were thus placed under disabilities, for the purpose of aiding each other in influencing the legislatures, or rather in influencing the voters, who were required to elect annually, members of the various legislative bodies. And, as in almost every age of the world, the cry of liberty, of individual freedom, of the right of every man to judge and act for himself, has exercised a charming influence over the masses of mankind, so, in the brief period intervening between 1820 and 1840, the rise and spread of what was known at that period of time as "Thompsonianism," (now Eclecticism,) in medicine, the advocates of which were soon recruited by the followers of Hahnemann, and all the various forms of imposition, by diligently urging upon the various legislative bodies and upon the people the idea that all the legal restraints which had been enacted solely for the protection of the people were only calculated to interfere with individual freedom of opinion and choice and to make the practice of legitimate medicine, a monopoly found little difficulty in securing the election of legislators, who succeeded in repealing almost all the clauses in the various laws and charters, that had exercised any restraint upon unlicensed practice. And, in proportion as this was done, more or less discouragement appears to have been felt by the supporters of medical organizations. The societies were less actively supported, and in many instances during the succeeding ten or fifteen years became practically absolete. So marked was this decline that from 1845 to 1850, instead of there being active working society organizations in nearly all of the states then existing in the union, sustained by large numbers of county and city medical societies, two-thirds of those previously organized had either discontinued stated meetings or held them with so small an attendance as to give them but little influence upon the profession at large. Should I stop here the impression would be made that the profession lost interest in the medical organizations simply because the laws had been so altered as to leave them without any exclusive privileges in regard to practice. This, however, while it had its influence was by no means the chief reason for this decline in the spirit of medical organization. As I have already remarked, in the granting of charters and enactment of laws, in almost every instance the legislative bodies had conferred upon the medical societies the power and enjoined the duty of their appointing and maintaining "Boards of Censors" for the special work of examining and determining the qualifications of applicants for admission into the profession. In all these instances a fee was charged for the examination and license. And, at the commencement of these organizations, during the first decade of the present century, almost the entire body of men who entered the profession annually entered through examination by some one of these "Boards of Censors." Consequently the fees derived from these examinations constituted to a very large degree the fund relied upon for defraying the expenses of the organizations, and the publication of their transactions. And, with few exceptions, in granting charters for medical schools in the different states, these schools were also endowed with the privilege of examining and granting diplomas to such of their students as complied with certain regulations, and these diplomas became equally a license to practice. While from 1800 to 1806 there were only three medical schools in active operation in the then existing states, namely: one in Philadelphia, one in New York, and one in Boston, the entire number of students in these schools did not exceed, annually, three hundred, and of these not more than fifteen annually received diplomas as college graduates. But so rapid was the multiplication of colleges, and so much was the student drawn from the office of the private preceptor to the college halls that before the middle of the century (1850), more than forty medical schools had been established, and the number of students annually attending was over 4,500, and the number of graduates thirteen hundred. This rapid transference of the application for legal admission into the profession from the censors of the several societies, State and local, to the medical schools exerted a powerful influence, coincidently, with the other influences that I have already indicated in causing such societies to decline in their efficiency and activity throughout nearly the entire country. Where they maintained an existence the members attending were comparatively few. In the great State of New York, for instance, it was rare that more than from forty to fifty members gathered at the regular annual meetings of the State society.

The rapid multiplication of medical schools during the period to which I have alluded, and the transference of applications, for admission to the profession, from the medical organizations to the colleges, thus practically making the college diploma the chief and popular evidence of education and admission to the profession, had not only caused a decline of the interest manifested in the medical societies, but it had also exerted a very material bearing upon the organization of the colleges themselves, by placing a direct barrier in the way of allowing their competition and rivalry to be based entirely upon the question of which should present the most perfect and extended facilities for acquiring an education, in the form of another question, which experience has shown to be far more powerful in its influence, both upon the students and the colleges, namely, at which college can the student obtain his diploma that is to be his license to enter the profession, with the least expenditure of time and money? The influence that this question had upon the schools, as they multiplied, is seen by a glance at the organization and requirements of the first colleges established in the country, and comparing them with the organization and requirements for a diploma fifty years subsequently, when the numbers had increased from two to between forty and fifty. The first college organization in the colonies of which the Pennsylvania University is still the representative, required for admission a full and fair standard of general education, including a knowledge of the classics, Greek and Latin, and all that was then known of the natural and physical sciences, and although the field of medical knowledge at that

time was hardly more than one-third of what it is at present, the college term was made full six months of the year, and the student was required to attend faithfully from two to three full years to obtain the primary or bachelor's degree, and could not obtain the title of "Doctor of Medicine" until he added from one to two years more—making a curriculum of study, period of time to carry it out, and period of active teaching in the college, hardly inferior to that which is demanded at the present time by, perhaps, half a dozen of the most advanced colleges in the country. But just so fast as colleges were multiplied, either in the same city or in neighboring cities, and the advantages of college instruction became more and more apparent, and the influence of medical society organizations, and the demand for higher education, just in the same proportion, was there a steady contraction of the annual college term, a diminution of preliminary requirements needed to enter college until at the end of the period we have under consideration, between 1840 and 1850, among all the forty or more colleges then existing, not one of them required of the student any standard of preliminary education, and the longest lecture terms were embraced in sixteen weeks of the year, while in several of them it was reduced to thirteen weeks, in which the student was to go over the whole field of medical science. The influence of this question as to where the student could get his diploma with the least expenditure of time and money, instead of where he could obtain the highest degree of medical education within a limited time, in deteriorating the educational standard of the profession, was so prominent as to attract the attention of many of the most eminent men in the profession at that period of time. Consequently it became a subject of active discussion in the medical society of South Carolina in 1835; and only a little later in the medical society of Ohio, and frequently in the medical journals of that period. Some of the most vivid pictures of the evil effects that had been produced, are to be found in the writings of that eminent man of the Mississippi Valley, Dr. Daniel Drake. About the same time the subject engaged the active attention of the medical society of New York, in which it received the full consideration of a special committee consisting of Drs. J. R. Manly, J. B. Beck, and John McCall, a trio of noble men, whose report in the transactions of that society may still be referred to with profit.

It was the renewal of the discussion of this subject in the meetings of the "New York State Medical Society" in 1844-5, that led to the assembling of a convention with which you are all familiar, in the city of New York, in May, 1846, which convention, though composed of only a little more than seventy delegates, nevertheless represented a majority of the States in the Union, and took all the necessary preliminary measures such as the appointment of committees, and the laying out of a full scheme for a permanent national organization, which had its completion in the establishment of the American Medical Association at an adjourned meeting in Philadelphia the following year.

The completion of the organization of the American Medical Association in 1847 on a representative basis, with the permanently organized State and local medical societies for its chief constituency, thereby inviting delegates from the various medical societies and organized institutions in medicine throughout the whole United States, very speedily developed so active a spirit for reviving old State and local societies, and the organization of new ones where none had before existed, that in less than twenty years there was hardly a State or Territory in our widely extended country that had not its medical societies again in more or less active operation.

The active interest in medical organizations thus rekindled has been maintained to the present time, and by holding the meetings of the national organization in various parts of the country from under the shade of the monument on Bunker Hill at the east, to the borders of the "Golden Gate" upon the Pacific; from the beautiful city upon the upper Mississippi almost upon the hydrographical axis of this great continent, to the Crescent City resting upon the Gulf, the members of the profession have been made socially acquainted with each other, geographically acquainted with every part of our country, until a spirit of just emulation, professional pride, and what is still more valuable, a spirit of investigation and zeal for the advancement of medical science throughout all ranks of the profession has reached a point higher than it has before attained at any period of time, and perhaps higher than it has attained in any country by means of purely voluntary organizations without the support of law. If I were to stop at this point the impression would be left that the present status of our professional organizations is, in a high degree, satisfactory. And so far as regards their social influence upon the profession, and the promotion of intercourse and acquaintance of the members in one section of the country with those of another, they are fulfilling their purpose as well as could be desired. But they are nevertheless defective, both in regard to the completeness and extent of the organizations, and in their practical working as professional and scientific bodies. For, while it is true, as I have before stated, that almost every State and Territory, and a large proportion of the counties and districts have organized medical societies more or less active in their work, yet these organizations embrace only a part, and in some instances only a minor part of those recognized as educated practitioners in their various States and localities. It would be productive of great good if methods could be devised by which these organizations would be made to embrace more nearly the entire body of practitioners in every locality where they exist. It would not only enhance their value by the acquaintance of their members, but it would bring about a more united and harmonious condition of the profession in every State, so that the voice of the profession, as indicated by the action of these organizations, would have greatly increased force, both upon the profession itself, upon the community in general, and especially upon the legislative bodies, in any direction in which laws were desirable for the protection of the public

health, or for the promotion of scientific investigations. Another defect is the want of sufficient method in the mode of cultivating the scientific interests of these associations.

Almost universally, up to within the last four or five years, reliance has been placed upon the reception at the various meetings of reports from committees generally appointed to report upon particular topics, or particular branches of medicine, and upon volunteer communications. Very little attention has been given to the planning of definite lines of inquiry, either by individuals, to be carried on in original investigations, or by the coöperation of many members of the society in different places keeping records of facts arising under their observation coincidently with records derived from other scientific sources, and the report of these facts annually to such committees as would give them the necessary analysis, comparison, and deduction. And, yet, this is the only way by which the data can be obtained for real advancement in several of the most important departments of medical science. Papers that are presented by individuals, embodying cases coming under personal observation, and the results of personal experience are valuable. The reports of committees appointed to report, for instance, upon a department of medical science, whether it be in surgery, practical medicine, or materia-medica, are also of more or less value. But, as experience has shown, they are necessarily made up largely, by compilations of facts already in the medical periodicals, or if derived directly from correspondence with practioners, they are given without the coincident knowledge of the topography and meteorological conditions, or of those circumstances which must necessarily go with the facts in relation to the prevalence of disease, to enable us to compare results in one locality with those in another.

It is this want of definite, well-devised plans of original investigation and inquiry on the one hand, and of well planned coöperative observations on the other, that has led many of the wisest and most learned among us, to think that all our medical organizations, whether State or national, amount to little more than a means of making professional acquaintance, enjoying annual seasons of social intercourse with each other, highly gratifying in their nature, but accomplishing little in the advancement of medical science. There is another element, also, which has been developed during the rapid revival of medical organizations throughout the country, which begins to develop effects clearly to be distinguished. I allude to the rapid increase of specialties in medicine. At the time of the organization of the American Medical Association in 1846-7, the number of specialties in the profession was very limited. They have always existed in some degree; but they existed up to that time almost entirely as a natural outgrowth in particular individuals from the circumstances that surrounded them; and, it was exceedingly rare in this country, and comparatively so in Europe, that individuals, at the commencement of their professional career, entered at once upon a special field of practice. Much less was it at all common for those commencing the study of medicine to carry on their studies with the idea of simply qualifying themselves for the practice of such particular branch of it as might be thought most available.

But, with the rapid multiplication of medical schools, to which I have already alluded; with the equally rapid transference of the functions that had hitherto been performed by independent boards of examiners to the medical colleges, by making the college diploma the license to practice, there came rapidly into existence the idea of pursuing limited fields of study, and still more limited fields of practice. And from the general division that had long existed, and necessarily must exist, of general practioners, surgeons and obstetricians, we began to have those who limited themselves to the study and the practice of special departments, until in the brief period of less than fifty years we have specialties for almost every part or region of the human body. Just in proportion as these special interests were developed, there became manifest a restless desire for privileges to advertise these specialties more liberally than the general "code of ethics" which had been adopted by the American Medical Association, would permit. And it was in reference to this subject that our national medical organization developed its first controversies in regard to the provisions of that code. And all who can recall the earlier years of the Association, will remember the warm and sometimes exciting debates that sprang up at different meetings, and the persistent efforts of those who had taken up special lines of practice, to make such alterations in the code as would give them greater privilege of advertising. It was not until at the meeting of 1869, after the subject, which had been referred to a well selected committee, had been considered during a whole year and reported upon—the report ending in a definite series of resolutions defining the relations of specialties in this particular, and also the relations to general practice, which was adopted by so unanimous a vote of the Association that the efforts in that direction were set at rest. And although all effort in that direction ceased to be manifested in the meetings of the Association, there was still a manifest disposition growing out of similar influences to bring about, under other names, some alterations in the code; and which resulted a few years later in its being referred to the judicial council with instructions to give it a careful revision. This was done and the report from that council, after consulting with large numbers of leading members of the profession as to any alterations that could be suggested, distinctly recommended that the code be allowed to remain unchanged; which report of the council was sustained by a unanimous vote of the Association.

In proportion as it became evident that no concessions in this direction could be obtained through the national organization, it also became apparent that these restless classes were taking less interest in the general organization, and inclining to the formation of societies of their own. This disintegrating influence has continued to increase until we have general and local organizations, distinct from either the State or national societies, representing not only ev-

ery specialty worthy of mention, but also some having no well defined purpose. And instead of those who are engaged in the various special departments coming up annually to the one great national body and thereby maintaining their intercourse, identifying their interests with the interests of the whole profession, and carrying on their special work as *sections* of the general organization, they have become, in a great degree, separated into distinct and independent organizations. And their publications instead of constituting a part of the transactions of the national association and of the State societies, have come to constitute volumes by themselves. We have thus lost in some measure the unity of our professional organization, and in the same proportion we have come to perceive clearly the existence of diverse, if not directly antagonistic interests. So much so, indeed, that it has become quite common to hear the interests of the general practitioner and the wants of the specialist spoken of as essentially distinct. And a large proportion of the people have come to regard in nearly the same light, the different special forms of practice and the different systems or sects in medicine, thereby directly helping to obscure in the public mind the line of distinction between the great body of supporters of scientific medicine and the various factions, isms, and excresences that hang upon its skirts. I must not be understood as being opposed to the practice of special departments in our profession. On the contrary they grow naturally out of the extent of the field of medicine, the wants of society, the limited duration of human life, and the limited extent to which human acquirements can be attained. But while this is all true, there is still plainly visible a tendency to excess in the development of special departments entirely beyond any wants of society, or any necessities in the field of medical inquiry, and it is the excess to which I call attention. It is perfectly compatible with the highest development of specialties that they be founded upon a full general field of education, and be allowed to develop in the individual after he enters upon his field of practice in accordance with his own special tastes and of the circumstances that surround him in that field. This is equally compatible with the maintenance of the general integrity and unity of the profession, not only in its feelings of interest, but in all its organization. And the subject is worthy of the most careful consideration, especially of those who are connected more or less with the medical press of the country, who by controlling the reading matter will thereby influence very much the opinions, and consequently the progress of the further organizations of the profession. All who are thus engaged should study carefully the past progress and the present influences which are at work, and while encouraging all legitimate branches of inquiry and of practice, they should repress with equal care the excesses, and the tendency to make these excesses disintegrative influences instead of elements co-operating with that harmonious unity which constitutes strength.

These defects in our organizations, namely the tendency to disintegrate through special interests and influences on the one hand, the absence of clear, definite, well-considered plans or lines of inquiry and schemes of original investigation on the other, can all be remedied if their extent is fully appreciated and the medical press will exert its legitimate influence in keeping both the extent of the defects and a temperate consideration of the best means for remedying them, steadily before the minds of their readers. So far as regards advancement in the line of co-operative observations and carefully planned lines of investigation, the American Medical Association has already made a beginning. During the last four years there has been steadily developing under the guidance of a standing committee, furnished with a small appropriation of funds, coincident observations and records in regard to appreciable meteorological conditions, including the ozonic and oxydizing agents of the atmosphere, and during the last year, including also the organic constituents, in direct connection with coincident observations and records in regard to attacks of acute diseases. And the progress made thus far, as will appear from the report of that committee during the present session of the Association, will give full promise of most valuable results. But such inquiries should be greatly extended and in some instances, should bring into co-operative action both national and State organizations.

But I must hasten from the consideration of this subject to a few further thoughts in regard to the educational status of the profession. From what I have already said in regard to the organization of schools, it will be seen that we have undergone in this country a complete revolution, in the mode of educating members of the profession during the last one hundred years. Prior to and extending into the first quarter of the present century, the young man intending to become a member of the profession, sought the office of some practitioner generally above mediocrity in his attainments and reputation, and became indentured for a term of years as a regular apprenticed student of medicine. And as a general rule, the student thus indentured was expected to continue in the employ of his preceptor, a period of from four to seven years, during which he gained his medical knowledge by the study of the preceptor's library, aided by the direct personal instruction of the preceptor himself, with such other limited means of illustration as could be commanded in the office of the ordinary practitioner. When he had passed to the last one or two years of his indenture period of study, and had mastered so far as he was capable, from his own efforts, and from the personal teaching of his preceptor, the more elementary branches of medicine, he was allowed to do minor work in surgery, prescribing for and dressing office patients, occasionally to visit the sick, frequently with his preceptor, and thus became familiar with disease clinically. The student thus served a direct apprenticeship in study and to some extent in practice, usually entering upon his field by himself, simply on the authority of a letter of recommendation and certificate of acquirements given him by his preceptor. It is in this way, that some of the most renowned men whose names appear upon the pages of medical literature gained

their education. It is true, at that period of time, it was generally thought necessary that a young man applying for admission to a preceptor's office should have a fair general education. Many of the best teachers would not take students until they had more or less of a classical education. Some were taken for long periods, seven years for example, and were required to devote the first two years of the seven to the study of the general branches of science as a preparation for taking up those of medicine proper. But as the field of medical knowledge was rapidly extending at that period of time, especially in the department of anatomy, physiology, organic chemistry, etc., the means for their successful study and illustration, could not be well provided in the office of a private preceptor. It was this that first suggested the idea of establishing separate rooms, and gathering means for illustrating those departments needing further illustration, in classes. And in the cities and large towns there came thus to be special classes of students, and special rooms in which to receive such parts of their instruction as needed illustration. And from this it was an easy step to the organization of a medical school by the union of several preceptors in the same enterprise. The medical schools coming into existence through such influences, as was the case both in Europe and in this country, their purpose was not to give a complete education, but to review the different fields of study, more especially for the purpose of teaching that department in each field, requiring special illustration. Hence the first idea of a medical college was not an institution for giving a student his full education, but simply to supplement the knowledge and education that he was still supposed to get in the office of his preceptor. And it only requires a glance at the history and progress of the first schools in America, which were organized in Philadelphia, New York and Boston, to see this relation fully presented, both, in the organization of the schools, and in the arguments and circulars that were used for attracting the attention of the profession to them. Hence, the medical school in its organization differed from the schools to teach other sciences, in being organized only to occupy a part of each year; the student being supposed to get all the details of his professional knowledge still in the office and library of his preceptor. The student while going to the college for more perfect knowledge in particular departments of study, still relied upon the certificate of his preceptor as his warrant for entering upon practice. Starting at this point as institutions only for supplementing the instruction of the private preceptor, to occupy only a limited portion of each year, they still in their incipient beginnings, insisted that a student to be admitted to these schools, should have a broad preliminary education.

Now, during the next forty years the schools rapidly multiplied—causing an active rivalry in competing for patronage as indicated simply by the number of students in attendance, regardless of the standards of attainment either in general or professional knowledge—until instead of supplementing the work of the private preceptor they came to occupy practically the whole field of professional education, as I have already shown while speaking of the early progress of medical organizations. In the same connection I also pointed out clearly *how* it came that while the colleges were rapidly absorbing the whole work of professionally educating the student, their annual college terms were steadily shortening and their standards of requirement lowering instead of increasing both, *pari pasu*, with the increase in the extent of their work, and the rapidly extending boundaries of medical science. I have shown that this anomaly in educational progress was so plainly the result of investing the college diploma with the attributes of a license to practice, while the colleges were at the same time dependent entirely upon the income from students for their support, that the agitation for a remedy led directly to the establishment of the American Medical Association, and through it, to the general revival of medical society organizations throughout the whole country, most of which are purely voluntary organizations having no legal status. It has appeared from the same review of the past, that during the first twenty-five years of our national existence, laws were enacted in nearly all the then existing States designed to protect the people from the impositions of ignorant and designing men claiming power to heal the sick, by prohibiting unlicensed practice, etc.; but which were nearly all repealed or so amended as to render them inoperative during the next thirty years by means of the popular prejudicies and false representations attendant upon the rise and spread of Thompsonianism and homœopathy; the one playing upon the mind of the masses with all the power of bold and ignorant empiricism, and the other captivating the credulous tendencies of the more fashionable circles by a mystic transendentalism inclosed in sugar pellets. The first has died a natural death, leaving a sickly offspring bearing the name of *eclectics*, while the second, like some medicines, retains its name as a "trade mark," and its organization for political influence, while its once transcendental vagaries have long since practically ceased to exert an influence over the treatment of disease. It will be seen from the foregoing brief glances at the past, that the profession in this country has already passed through three distinct epochs or stages of progress, and is now entering upon the fourth. The first may be called the period of apprenticeship in education and the incipient organization of medical societies and medical colleges, with laws founded solely on the idea of protecting the community on the one hand, and of fostering education on the other. The second was the period of transition, during which medical colleges were most rapidly multiplied and the education of medical students was transferred from the private preceptors to the schools, carrying with it substantially the substitution of the college diploma for the license of the independent examining boards, and in its latter part distinguished by the advent of Thompsonianism and homœopathy, as organized forces widely diverse in their characteristics, but united in their work of denouncing regular medicine and in procuring the repeal of nearly all the legal restrictions placed upon the unlicensed practice of medicine. The third period extending from 1845 to 1870 is one

in which the profession finding its educational interests practically transferred to forty or fifty colleges acting under charters obtained from separate legislative bodies, each dependent for support on the *number* of students it could attract; its legally organized societies deprived of nearly all that was valuable in the previously existing laws, sought protection for itself by a more extended combination of interests, and a more general union and harmony of action in the foundation and development of a national organization which, by its representative character, should give emphasis and force to its recommendations; and by equally fostering a more complete voluntary organization of the profession in every State, county and city in the whole country.

During all these periods the different departments of medical science had been rapidly advancing, and entirely new departments were being added; and during the latter, especially, the division of the general practical departments into limited fields of practice called specialties, took place almost as rapidly as the increase in the number ot medical schools. The great defect in the practical working of this third epoch of our history, which may be properly called the period of voluntary organization and national union without the support of legal forms or legislative enactments, was the absence of any adequate medium through which the voice of the great central and representative body could be readily and reliably transmitted, either to the profession at large, to its organized constituents in the several State and local societies, or even to its own members. Meeting once a year, and depending mainly on general reports and volunteer papers for its scientific interest, and on the voluntary publication of abstracts of its proceedings once in the general medical press and the scanty distribution of its annual volume of transactions, for its moral or ethical and educational influences, it is not surprising that it should have failed to accomplish all that its more earnest supporters had hoped. And yet the careful student of history will be surprised to find that, with all these defects, the united organizations, State and national, have still exerted a great influence in devising and enforcing a uniform and high standard of ethics; in greatly increasing the general spirit of investigation; in pushing the demand for a higher standard of education so far as to induce a considerable number of the best class of medical colleges, especially those constituting departments of well established universities, to actually adopt a more systematic and comprehensive system of instruction, in spite of the strong opposing forces of a pecuniary nature, and the length of time they have not only maintained, but steadily increased their number and influence.

Having fairly entered upon the fourth era of our professional history our present status may be briefly expressed in the following propositions or general statements: First, the profession consists of an important, I may say essential, class of human society, numbering 60,000 or 70,000 persons, more or less educated, and engaged in the noble work of alleviating human suffering, by fostering every sanitary measure calculated to prevent disease, and culling from every field of nature the means for combatting disease when not prevented, and as a whole animated by a high moral tone, and an active spirit of social and scientific progress. Second, this great class of society is pervaded and unified by voluntary society organizations for the mutual improvement of its members and the advancement of all its important interests, in a very large proportion of the cities, counties, and States, all centering in one representative national organization—the American Medical Association—constituting the frame-work of an organization, which, if completed by the filling of its gaps and the extension of its membership, and voiced by an efficient and frequent medium of communication, both with its own membership and with the profession at home and abroad, would in its influence be well-nigh irresistible. And yet for the want of this filling up of the ranks and the absence of the medium for efficiently voicing its doings and utterances its influence is not only limited, but the disintegrating forces I have already pointed out, are making visible progress. Third, not only is the education of the profession in the hands of 60 or 70 independent medical schools, but the influence of their rivalry is still perverted by the recognition of their diplomas as equivalent to a license to practice. And while a few have yielded to the demand for more extended college courses, graded curriculums with annual examination in progress, far the larger number still adhere to four and five months repetitional courses of instruction annually, with only the one examination at the close, and while making a show of enlargement by preliminary lectures and short spring courses which the students may attend or not as they please, each carefully avoids any positive increase in the actual requirements for graduation through fear that its rivals will not do the same. Fourth, the long absence of any adequate laws for protecting the people from the impositions of ignorant and unprincipled medical pretenders, and the increased attention given to the sanitary interests of communities, have again awakened the attention of legislative bodies and are developing a strong tendency to once more enter upon the enactment of laws for enforcing sanitary improvements on the one hand, and the ensuring of a higher standard of attainments on the part of those who shall be permitted to enter upon the practice of medicine, on the other. This tendency is manifested in the establishment of national and State boards of health, and in legislative acts for regulating the practice of medicine in several of the States. It is this revival of legislative tendencies which constitutes one of the most interesting features in the present status of our profession, and is rapidly developing changes of the highest importance both to the profession and to the people. And on the final outcome of these changes will depend the status of the profession for the next fifty years. The fact that the great advancement in all departments of medical science and practice, and the complete transferrence of the work of education from the preceptor's office to the schools, is imperiously demanding a corresponding advance in grading and extending the curriculums, and adding to the actual requirements of those institutions, is

clearly perceived both by the profession and the people. That the highest interests of human society require the adoption and enforcement of such regulations as will ultimately insure a fair standard of education and mental discipline before entering upon the study of medicine, and more efficient methods of enforcing a fair standard of professional attainment before receiving a license to practice, is equally apparent to all.

To attain these important ends is pre-eminently the work of the present epoch of our history. To accomplish this work in its fullness four things are necessary: First, a legal and reasonably uniform definition of what shall constitute the minimum amount of general education that shall be required to fit the student to enter upon the broad and intricate field of medical studies. Second, a similar legal definition of what shall constitute the minimum amount of time required for strictly professional studies, how much of it must be spent in medical colleges and hospitals, and the minimum standard of professional attainment to be required as a condition for receiving a license to practice. Third, the establishment in each State of a competent, reasonably stable, and impartial tribunal which shall determine by actual examinations and other proper tests, when these standards, both of preliminary and professional attainments have been complied with; and a certificate from which, shall be necessary before commencing medical study, and license before admission to practice any department of medicine. Fourth, the steady increase, both in filling up, extending, harmonizing the society organizations of the whole country by which they shall more fully bind all together in one representative national organization, thereby preserving the high moral tone so long embodied in our national code of ethics, facilitating co-operative investigations in the advancement of scientific knowledge and that frequent intercourse which breaks our local prejudices, broadens our patriotism, enlarges the field of our mental vision and makes us happier individuals and more skillful physicians. To accomplish the first three of these objects requires the most considerate and wisely planned legislation in each of the States in this great Union. And the time has fully come when those I more especially address on this occasion connected with the medical press should enter carefully upon a temperate, candid, and liberal discussion of these important topics. Let us avoid all personalities and local prejudices, by so studying the history of the past that we realize the important historic truth, that all great changes in human progress, whether forward or backward, are the result of laws and forces that govern alike the workings of the human mind and the evolutions of human society. Then we shall more readily look beyond the motives of individuals to the social factors which may have occasioned the motives to exist. I am not sure but the time is already at hand when the American Medical Association should appoint a well-chosen committee, charged with the duty of devising some uniform scheme or plan of legal methods for making the definitions and establishing the examining tribunals to which I have just alluded, that they might be submitted to the several State societies, and when well matured, by them submitted to the several State legislatures. Such a course started now coincident with the revival of the disposition to legislate on medical matters, and pursued with both wisdom and patience, might result in the more speedy adoption of judicious and reasonably uniform laws in relation to the important subjects of medical education and practice throughout the whole country, than many of us would expect. But whether speedy or slow, it would be doing our legitimate part of a work demanded by the highest interests of human society. For want of such timely action and discussion, already we see several imperfect and incongruous enactments, establishing State boards to grant licenses to practice, not founded on any defined standard of attainments, either literary or medical, but on the presentation of a diploma granted by some incorporated medical school or college, whether labeled with some special trade-mark or not, and without any adequate means of determining whether the diploma was granted simply on the reception of a specified sum of money without the recipient ever having seen the inside of the college granting it, or after an attendance during the ordinary term of a nine months' gestation and the form of an examination. Consequently we see all sorts of medical pretenders, and young men and women in all stages of education, equally clothed with a *legal* license to practice by the very board which had been created for the purpose of elevating the standard of medical attainments for the benefit of the country at large. But the absurdities of this well intended, though unwisely devised legistion do not stop here. No sooner does the State Board fairly begin to clothe the offshoots of every *pathy* and *ism*—that hang as excrescenses upon the skirts of true medical science, with formal legal license to practice medicine, than certain other restless disintegrating elements inside of the profession, begin to put in the plausible plea that whatever the law *licenses* the profession should recognize, by changing some of its most sacred ethical rules, and open the way for the educated physician to meet on a common platform, the mountebank clothed in Indian costume and blowing the fame of his herbs on a tin horn through the streets, or the scion of transcendentalism labeled with a trade-mark indcating the universality of the law of *similars;* thereby speedily making the sickroom again the scene of collisions and quarrels, as disgraceful as any described by a Stearns or a Drake half a century since. It may be necessary, however, that some of these glaringly absurd results of incongruous acts of legislation should be experienced as stepping-stones to something better. For there are many restless, disturbing elements in all classes of society which can only be controlled by allowing them to practically *feel* the evils of their schemes. But the accomplishment of the fourth object I have named rests not on legislative enactments, but upon the action of the profession alone. I allude to the maintenance, extension, and ultimate completion of our local, state and national organizations, under one harmonious and co-operative system which shall continue to unify, elevate and advance all the social, ethical and scientific interests of the pro-

fession; and consequently promote in the highest degree the welfare of all classes in the community. Does the profession at this time contain those elements of wisdom, moderation and perseverance, necessary for effectually opposing all the disintegrating and iconoclastic elements that I have pointed out in the earlier part of this address, and steadily advancing on every line, State and national, until the victory is sure? Or shall the work of disintegration, so boldly begun in New York, extend its baneful influence until social anarchy again holds sway over the whole profession? These questions are worthy of the most careful consideration of every friend of medical science and progress. After almost half a century of active mingling with my professional brethren in every part of our great country, and a careful study of its history, with all the elements and forces calculated to influence its progress in the midst of our free political forms of government, I am satisfied that the first of these questions can be answered in the affirmative and the second in the negative. Measures are already rapidly maturing which will render the present social upheavals and imperfect attempts at legislation only the precursors of an awakening to wiser and more active work in the right direction, and consequently of hastening results of the most beneficial character. With a platform which requires us to study man in all his aspects of health and disease, and to seek remedies for his relief in every field of nature aided by every human science, to apply them on any principle and in any quantity that an enlightened judgement may dictate as most beneficial to our patients, and to cordially extend the right hand of fellowship to all who rally upon it under the banner with the single inscription "Doctor of Medicine"—but to sternly discard all who would mar the significance and beauty of that inscription by qualifying it with the addition of an *ic*, or *ism*, or *pathy*—our noble profession will continue to uphold its own dignity and honor, and to extend more and yet more its blessings alike to the rich and the poor, the learned and unlearned, as long as disease and death continue to afflict the great family of man.

JOURNALISM DEVOTED TO THE PROMOTION AND CONCENTRATION OF MEDICAL AND SURGICAL SCIENCE.

BY HENRY O. MARCY, A. M., M. D.

Read to the American Association of Medical Editors, June 5th, 1883.

It is scarcely more than two decades since the late surgeon George A. Otis, whose great work, "The Surgical History of the War of the Rebellion," has won for its author imperishable honor, advised us as his pupil even at the beginning of medical study, to devote a certain portion of each day in the discharge of the duties of curator of a natural history collection.

This he did with the statement that the medical man needed a side issue for his superfluous energies. The late Dr. A. A. Gould, of Boston, who was one of the wisest clinical instructors, it has been our fortune to meet and ever in demand at the bed-side of the rich and the poor alike, found time in the midst of his busy career to give attention to natural science, with certain branches of which his name will ever be connected as one of the brightest stars in the galaxy of American scientists. Our venerable friend Dr. D. H. Storer, of Boston, now in his eightieth year and still mentally the peer of the best, has had a clinical career of over half a century, which challenges comparison with any of this generation, and yet, he has written four large volumes upon the fishes of Massachusetts, a standard work, and of a classical value second only to that of the great Agassiz himself.

Little more than a century ago the illustrious Haller was professor of botany, physiology, anatomy, obstetrics and surgery, a whole medical faculty himself, and yet devoted some hours daily to the writing of his Bibliothēke of Medicine. What does the lesson of these periods and lines teach? Not only a superior ability, wisdom, knowledge and judgment, but as we all know as compared with the requirements of to-day, that the rapid advances of the cycling years have brought with them new demands, new fields of investigation and an unexampled progress.

The border lines of our knowledge have steadily and rapidly widened, until the devotee of the science of medicine, no matter how diligent and learned, ceases to hope for more than a general knowledge of its diversified factors and confines himself with ambitious purpose to some one or more of its subdivisions.

The Darwinian doctrine of development holds good in the evolution of all the sciences, to which medicine is no exception, and the specialist of to-day in law, in theology, in natural sciences in their manifold application to the arts, as well as in medicine, is the legitimate fruitage of the age in which we live. From this standpoint it is well briefly to review the literature of medicine. Thanks to the one man of America, the par-excellence specialist above all others in this bibliothecal field of labor in his generation, Dr. Billings, of Washington, this is comparatively an easy task. We turn with ever increasing admiration to the ponderous folios of Haller, of Margagni, of Sydenham, of Harvey, of Hunter and others of the old masters, men who laid deep the foundations of medical lore, whose observations have long ago been appropriated to the current stock which finds place in every text book of to-day.

Individuality is thus early lost for the most part in the ever-turning Kaleidoscopic pattern, the old facts are re-arranged, old grists re-ground in new mills and the product stamped "patent" until it is a wise father who knoweth his own mental progeny. From Dr. Billings' most interesting and instructive address delivered before the International Medical Congress in London, 1881, we learn that it is usually estimated that about one-thirtieth part of the whole mass of the world's literature belongs to medicine and its allied sciencies. Thus it appears that our medical literature now forms a little over one hundred and twenty

thousand volumes, properly so-called, and about twice that number of pamphlets, and that this accumulation is still increasing at the rate of about fifteen hundred volumes and twenty-five hundred pamphlets yearly. There are, by estimate, about two hundred thousand trained medical practitioners scattered over the earth, and one-half of the number belong to America and Great Britain and her colonies; of these about one in twenty are producers or contributors to medical literature.

The special characteristics of the literature of the present day are largely due to journals and transactions, and this is particularly true in medicine. Our periodicals contain the most recent observations, the most original matter, and are the truest representations of the living thought of the day, and of the tasks and wants of the great mass of the medical profession, a large part of whom, in fact, read very little else. They form about one-half of the current medical literature, and in the year 1879 amounted to 655 volumes, of which the United States produced 156; Germany, 129; France, 122; Great Britain, 54; Italy, 65; and Spain 24. This is exclusive of journals of pharmacy, dentistry, etc., and of journals devoted to medical sects and isms. It will be seen that at present more of this class of literature appears in the English language than in any other, and that the number of journal contributions is greatest in the United States. A marked increase has occurred in the literature of hygiene during the last two years, and this especially in England, France, Germany and the United States. The literature of diseases of the nervous system, of opthalmology, otology, dermatology and gynæology is also increasing more rapidly than that of the more general branches.

The increase in both the amount and value of the literature of the several specialties in medicine is readily seen by a comparison of recent catalogue and bibliographies with those of twenty or thirty years ago, and this increase still continues at a greater rate than prevails in the more general branches. There are great differences of opinion as to the relative value of this increase and as to its future effect upon the profession, but there can be no doubt as to the fact. There must be specialties and specialists in medicine, and the results will be both good and evil; but the evils fall largely upon those specialists who have an insufficient general education; who attempt to construct the pyramid of their knowledge with the small end as a foundation. It has been said by Dr. Hodgen that "in medicine a specialist should be a skilled physician and something more, but that he is often something else—and something less."

"It is by the labor of specialists that many of the new channels for thought and research have been opened, and if the flood has sometimes seemed to spread too far, and to lose itself in shallow and sandy places, it has nevertheless tended to fertilize them in the end." In pursuance of the thought of journalism and its influence upon special departments of our science, I quote from tables given by Dr. Billings, showing the number of volumes of medical journals and transactions published during the years 1879 and 1880.

TABLE I.

Subjects.	Journals and Transactions.	Total.		United States.		Great Britain and her Colonies.	
		1879.	1880.	1879.	1880.	1879.	1880.
General and Miscellaneous Practical Medicine	Journals	336	335	75	83	26	26
	Transactions	169	151	56	54	11	12
Anatomy, Physiology, Morphology, Biology.	Journals	26	27	.....	.....	4	4
	Transactions	5	3	1	1	.....	.....
Diseases of Nervous System and Insanity	Journals	17	21	3	5	4	4
	Transactions	1	.....	.....	.....	.....	.....
Surgery	Journals	3	4	.....	1	.....	.....
	Transactions	2	2	.....	.....	.....	.....
Ophthalmology.	Journals	19	20	1	1	1	2
	Transactions	2	1	.....	.....	.....	.....
Skin Diseases.	Journals	5	5	1	1	1	1
	Transactions	1	1	1	1	.....	.....
Otology	Journals	6	6	2	2	.....	.....
	Transactions	1	.....	1	.....	.....	.....
Gynæcology and Obstetries	Journals	18	20	2	2	1	1
	Transactions	5	2	3	1	2	1
Hygiene and Jurisprudence.	Journals	36	40	6	6	2	3
	Transactions	13	13	3	3	2	4
Pharmacy and Medical Chemistry	Journals	53	54	7	9	7	6
	Transactions	8	4	4	3	.....	.....
Dentistry	Journals	10	15	6	10	.....	.....
	Transactions	.....	.....	.....	.....	.....	.....
Homœopathy	Journals	33	36	12	16	4	4
	Transactions	5	4	3	3	.....	.....
Eclectic, Botanic Physico-Medical	Journals	11	13	11	13	.....	.....
	Transactions	2	2	2	2	.....	.....
Popular Advertising Mineral Waters	Journals	35	33	8	10	4	4
	Transactions	1	1	.....	.....	.....	.....
Veterinary	Jonrnals	27	29	1	3	3	3
	Transactions	.....		.....	.....	.....	.....
Laryngology	Journals	.....	2	.....	1	.....	.....
	Transactions	.....	1	.....	1	.....	.....
Total	Journals	635	680	135	163	57	58
	Transactions	215	184	74	69	15	17

Thus we have many workers in many fields of labor. Something of the astonishing magnitude of the result accomplished is apparent as we turn the closely-printed pages of the Index Medicus in its monthly visitation to our tables. This latest outcome of specialistic journalism is the greatest marvel of them all. He who has or thinks he has a new inspiration will do well to examine carefully its pages and see if his own thoughts have not been better expressed by another, and thus save himself the mortification and chagrin of being shown up by some merciless reviewer as having purloined the original observations of Dr. Smith, or mutilated the wiser teachings of Mr. Jones. He who seeks to know further than that which has been written will do well to consult the already published two volumes of the catalogue of the library of surgeon general's office—quarto volumes in double columns of fine type, each containing nearly one thousand pages, and yet, in the alphabetical arrangement, not through "C." This gives assurance of its value to the medical student when finished; a work which cannot be over-estimated by our profession, and, in its completion by authority of congress, every medical man should have an active interest. From it, although not a complete index of all that has been written, we gather some idea of the accumulated lore of the world's work in our especial field of labor.

TABLE II.

Subjects.	No. of	Total.		United States.		Great Britain and Colonies.	
		1879.	1880.	1879.	1880.	1879.	1880.
Anatomy and Physiology...	Books.....	172	106	7	17	19	18
	Theses.....	29	30				
	Jour. Articles...	1371	1329	162	177	157	170
Pathology.....	Books.....	22	16	2	3	....	2
	Theses.....	16	9				
	Jour. Articles...	158	202	32	32	25	27
Practice of Medicine.....	Books.....	372	264	52	27	39	51
	Theses.....	257	235				
	Jour. Articles...	5799	4716	1454	1154	1085	918
Diseases of Nervous System..	Books.....	135	144	38	32	19	30
	Theses.....	63	59				
	Jour. Articles...	1761	1667	406	410	342	303
Surgery.....	Books.....	135	150	18	27	5	23
	Theses.....	165	161				
	Jour. Articles...	3477	3087	894	823	844	706
Ophthalmology.	Books.....	60	64	10	15	7	7
	Theses.....	44	34				
	Jour. Articles...	992	1007	187	228	81	101
Otology.....	Books.....	12	23	3	9	3	1
	Theses.....	8	9				
	Jour. Articles...	313	535	114	185	38	74
Skin Diseases..	Books.....	33	44	3	9	2	8
	Theses.....	22	24				
	Jour. Articles...	441	547	63	95	115	101
Veneral.....	Books.....	35	29	1	2	4	4
	Theses.....	19	19				
	Jour. Articles...	399	348	76	72	45	31
Gynæcology....	Books.....	47	50	12	16	2	6
	Theses.....	44	27				
	Jour. Articles...	1130	1132	364	416	239	189
Obstetrics.....	Books.....	45	52	6	7	6	8
	Theses.....	37	49				
	Jour. Articles...	1270	1114	435	430	216	195
Hygiene.....	Books.....	178	247	62	80	29	48
	Theses.....	2	16				
	Jour. Articles...	891	1061	173	239	161	237
Jurisprudence ..	Books.....	15	30	2	2	1	1
	Theses.....	8	11				
	Jour. Articles...	368	726	72	167	44	103
General and Miscellaneous	Books.....	382	377	94	96	46	52
	Theses.....	29	63				
	Jour. Articles...	1799	2116	349	476	200	274
Total by Countries.....	Books.....	1643	1596	310	339	182	259
	Theses.....	743	746				
	Jour. Articles...	20169	19587	4781	4904	3592	3443

If this be the exponent of the result already attained, and this the rate of accumulation going on, what will the next century produce, and when will the subdivision of medical specialism end?

Infrequent vibrations are independent sounds, increase the rapidity, and we produce the musical note which, under skillful manipulation, becomes the smoothly flowing cadence which may blend into the harmony of a grand symphony.

Selfishness, as usually understood, narrows the sphere of a man's action to the gratification of his personal ends, widen the thought to that which is for the real best good of the individual in the highest sense, and we verily become our brother's helper, doing away, as no longer needful, with bolts and bars, police courts, jails, prisons, armies, and navies, yea, even with our churches, except there to congregate for rejoicing, for self is swallowed up in the greater good. In this seeming diversity there is a unity of purpose of power and of result. In the enthusiasm of the young convert we are wont to exclaim, "I am of Paul, I of Apollos." In the wider truth we are led to see that these are only ways of individual working, and that the great end to be attained is the same.

Pure science is unadulterated truth, and he who seeks it for its own sake and the good which it may bring, is enlisted in a common cause with one watchword under the same banner. But, says the objector, medicine is not a science, at the best it is but an imperfectly understood art. Mathematics pure and simple is accepted as an exponent of science, "for figures cannot lie." Is not our profession builded upon objective factors, and may these not be combined with results as clear, as definite, as demonstrative as figures? Facts, not representatives imaginary, are our factors, integers of no doubtful meaning, and he who contributes to their number makes the world his debtor.

Last year members of this Association visited the seemingly boundless prairies of the great Northwest, a *terra incognita* of a few years ago, roamed over by the wild Indian and the buffalo. Energetic companies were pushing the iron track in various directions out into the vast expanse without a single settlement as an objective point, or for miles and miles the upcurling smoke to mark the site of a single frontier cabin. When asked the purpose and object of this great expenditure and the hope of recompense, the cheerful reply always was given: "We are the developers of this vast country; these lands are waiting to yield harvests unhoped for by the Eastern farmer, and the poor, over-worked, half-starved of other continents will yet bless our efforts." This we call the energy, the push of the nineteenth century, which marks its deeds in monuments of useful labor.

A few years since and the physician who used the microscope was supposed to be dabbling in the æsthetics of his calling; what could be the practical outcome of this painstaking, time-consuming at best minutiæ of labor? The realms of the infinite are beneath as well as above the natural ken of mankind. By the aid of this little instrument, from a knowledge of ultimate structure, there has been cleared up many a doubtful acceptation of function—yea, even the very basis of modern physiology established. From the standpoint of such observation a Virchow revolutionized all our ideas of pathology.

Tyndall and Pasteur showed that the ever-prevailing dust contained the particular causes of fermentation which were again demonstrated by careful microscopic observation to be dependent upon vegetable plants, so minute as heretofore to have escaped especial notice. It remained for the genius of a Lister to demonstrate that from the rapid development of such germs arose in large degree the danger to wounds.

By the avoidance of the dangers which such knowledge taught, untold numbers of lives have already been saved, and there is being elaborated a system of wound treatment based upon fundamental factors of truth, more sure and certain than the wildest dreams and fancies of the alchemist of old who concocted his healing balsams at the midnight hour under the divine influence of the stars. The same line of investigation applied to disease clears up the mysteries attendant upon the group of so-called contagious diseases and demonstrates, in many, an entity *sui-generis*. There is a particular something which from individual to individual breeds true and gives certain objective symptoms, and to these have been given definite

names. Although daily widening, the border lines of our knowledge in these directions are easily reached, and the outlook would seem to indicate that much which had been considered settled will be revolutionized and the facts re-arranged, so that in the near future a large part of so-called medicine will be rewritten. Accept the demonstrations already made and grant the inferences therefrom to be correctly drawn, the science of medicine and surgery will be greatly simplified and its practical application many fold increased for good.

Volumes have been written and the best labor of many lives has been spent in the study of the reproductive processes of man and animals. A whole system of classification has developed therefrom, yet the observations thus made were truths only in part which led on this account to many erroneous conclusions; while from a broader study and deeper knowledge it remained for an Ercolani to demonstrate a single and universal fundamental law of physiological modality.

In the not remote past, Panacea has had a longer train of enthusiastic followers than her sister Hygeia. Now sanitary science, although scarcely popularized, very properly is taking its position in the front rank of all the means to be employed in the lessening of suffering and the prolongation of life. As in surgery so here, inscribed upon the key-stone of its great arch is the one word *clean*.

Cleanliness is next to godliness, and filthiness is the great physical sin. But in this realm, also, as in all others of science, order is being restored out of chaos and once having obtained the key the hieroglyphics of nature are translated with no uncertain meaning, and the simplicity and unity of the divine plan appears. To noxious gases no longer do we attribute the chief dangers arising from decomposition, but the rather thereby do we know that myriads of minute microscopic organisms have been preying upon and taking to pieces the waste albuminous products of life, again to restore them to a condition for higher utilization.

Thus the never ending cycle of life goes on, nothing wasted nothing lost, and as the infraction of the law of gravitation brings with it its penalty, so the excess of waste, over repair, and the devitalization of tissue which must ensue, render man the easy prey to agencies ordinarily invisible which stand ever ready to take to pieces his higher organization and refit it for new and perhaps better use.

The beginnings of knowledge are ever involved in mystery and doubt. The seeker is led into diversified and seeming labyrinthian paths, but like the labyrinth of old he who holds the key may safely tread its mazes and understand its plan. While we rejoice in that to which our profession has already attained, we look with longing eyes to the victories of the near future. To the better accomplishment of this, we welcome the open fields of subdivided duties and specialistic labor. We rejoice in the activity of united efforts to make of greatest avail these results by combining into societies and the publication of such observations in journals devoted to special interests.

In this spirit we welcome the new departure of our grand national association at whose birthday fest we are here assembled. May the JOURNAL, which this meeting sanctions and to which this year gives christening, as the Association itself has been, be a developer of special labor. Like the States to which we swear fealty and whose organization we here represent, may the special fields of labor be carefully cultured, and like the grand old union which we ever delight to honor, the new JOURNAL be in the broadest sense the representative of the progress of the divine art of healing.

We should give encouragement to such publications, should teach the rank and file of our profession who in a certain sense must ever be general practitioners not to seek in other fields—as natural science or politics—an escape-valve for extra energy, but let each physician select some subdivision of his work where he may find, and if possible widen the boundary knowledge of his calling. Let him select the publication devoted to his field of special labor, contribute to its columns his own observations and uphold with generous sympathy every effort of real progress.

Last week Dr. Oliver Wendell Holmes, in his address of welcome to the clergy and laity at their grand annual festivity, referring to the theological dissentions that have from time to time arisen in the church, says: "Now it has been one of the flock that has got his foot on the lowermost of the five bars of the sheep-fold and the bell-wethers ring in a council to pull him back if they can or push him over if they must. Now it has been to examine a leaky creed and determine whether or not the hole could be stopped by the proper use of that famous plastic material known as theological soft solder."

Doctors may take warning from clerical antagonisms, for the hard spelter which our New York friends have recently been using in their attempts at patching the heel of the old craft have only opened up new leaks, and awakes the satirical criticism, "Behold how these brethren love one another." May the time soon come when we shall not broaden our phylacteries, but recognize only one law—the divine code of human brotherhood. Then, instead of antagonisms there will be developed yet more fully a generous rivalry for good.

We all possess diversity of gifts, but should be actuated and guided by one spirit. The cavalry shall not say to the infantry "You are too slow for our purpose," the infantry shall not say to the artillery "You are too heavy and cumbersome in your outfit," but all with one accord as members of the grand army strive to accomplish the work set before it. With this end attained, under the clear light of scientific truth, the *isms* which smack of ignorance will cease to exist, new fields of labor, more attractive because nearer to the great source of truth, will open and there will yet arise a more noble emulation for the still greater advancement of a united and harmonious profession.

THE annual meeting of the American Public Health Association takes place in Detroit November 13. The session will probably continue four days.

THE USE OF THE TREPHINE IN TRAUMATIC EMPYEMA ASSOCIATED WITH FISTULA.

BY T. G. RICHARDSON, M.D., PROFESSOR OF SURGERY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF LOUISIANA, NEW ORLEANS.

[Read before the American Surgical Association at its late annual meeting in Cincinnati, May 31st, 1883.]

Chronic suppurative pleuritis with an imperfect fistulous outlet, either external or bronchial, is not an uncommon result of gun-shot or other penetrating wounds of the thoracic cavity; and it is no secret that the resources of surgery have not heretofore offered much encouragement to the unfortunate sufferers. In the majority of such cases there is contraction or sinking in of the injured side, a constant discharge of fetid pus, persistent cough, irritative or septic fevers, and more or less rapid exhaustion of strength, terminating usually in death within a few months, or a year or two at the farthest.

Two main difficulties are encountered in the treatment of such cases: 1st, imperfect drainage, upon the correction of which the life of the patient depends; and, 2nd, permanent separation of the lung from the chest-wall by contraction of the organized exudative membrane upon the surface of the former. It is to these two points alone that I shall call attention in this brief contribution.

1st. The serious obstacle to drainage in these cases is not the ordinary stenosis to which nearly all sinuses in the soft parts are liable, but approximation of the ribs, consequent upon the sinking or falling in of the chest-wall. Owing to the shortness and greater degree of fixedness of the first four or five ribs, very close approach of their adjacent borders is seldom seen except in quite young subjects. The same is true of the entire series near the spine in consequence of their close attachment to the vertebræ. But in other situations where greater latitude of motion exists, more especially along the lateral planes of the thorax below the fifth and sixth ribs, it is not rare, in the class of cases now under consideration, to find the adjacent edges closely applied, and sometimes even slightly imbricated. Under these circumstances it is impossible by any ordinary means to preserve satisfactory drainage by an opening, however extensive it may have been made, in an intercostal space. Tolerably strong silver canulæ have been indented by the approaching bones, and rubber tubing is frequently worse than useless. The result is entrance of air, decomposition of the pus, septic or irritative fever, and death more or less rapid as the disease may assume the former or the latter character.

2. The condition resulting from compression of the lung by inflammatory membrane, and consequent inability of the organ to expand to its original dimensions, is not necessarily fatal or altogether irremediable. Pyogenic sacs when freely drained, and at the same time protected from dessication, more especially if kept moist by antiseptic fluid or vapor, do not usually give rise to pyæmia or even to irritative fever. They are certainly sources of great discomfort and sometimes grievous annoyance to patients, but fortunately in the class of cases here referred to, they are frequently obliterated by the operation employed for overcoming the obstacle to drainage, as I hope to be able presently to show.

Seeing, then, that the great danger in these cases depends mainly upon imperfect drainage, it is to the best method of correcting this difficulty that our efforts should be directed. The impracticability of securing a sufficiently free opening through one or more of the intercostal spaces, especially along the lateral and lower parts of the thoracic wall, has already been mentioned; and I may here add, that in this respect counter-openings, necessary as they often are, have no advantage over the original outlets. Under these circumstances, the surgeon's only resort is removal of a portion of one or more ribs. This may be accomplished by one or other of the ordinary methods of bone-resection, but, in my judgment, much more readily, and in most cases, with equally good results, by the use of a large trephine.

The idea of "trepanning" the thorax is not new. The operation is said to have been proposed by Hippocrates, and, in more modern times, has been modified by Reybard and adopted by Récamier, Trousseau and others in idiopathic empyema.[1] This consisted, however, in simply perforating a rib and inserting a canula, the greatest care being taken to prevent the ingress of air.

Lossen, of Heidelberg, ascribes the first suggestion of resection of the ribs, for what he terms retro-costal abscess, to Roser in 1859, and states that this surgeon performed the first operation of the kind in 1865, with the effect of curing his patient in fourteen days. He (Lossen) adds that in 1869 Simon excised a portion of the sixth rib in a case of empyema with fistula for the purpose of permanently enlarging the canal. The cavity ultimately closed, the favorable result being due in the opinion of the operator, to sinking in of the resected rib.[2]

Dr. Schneider, of Konigsburg, in 1877, in a case of pleuritic suppuration, resulting from a gun-shot wound involving the third rib, removed from the second rib a section two inches in length, from the fourth, 3.8 inches, from the fifth, 3.8 inches, from sixth, 4.4 inches, and from the clavicle, 1.5 inches, by which means the chest-wall was allowed to sink in and obliterate the pleural cavity.[3]

It will thus be seen that the benefits derived from resection are threefold: 1, Unobstructed drainage; 2, free space for the application of antiseptics; and, 3, shrinkage of the chest-wall. In a large number of cases, more especially those in which the collection of pus is confined to the lower and lateral regions of the thorax, the mobility of the ribs, the flexibility of the long costal cartilages, and the yielding nature of the diaphragm permit the closing of quite large retro-costal cavities without any assistance at the hands of the surgeon other than may be necessary for drainage and asepsis. In such cases a large opening at the site of the fistula, or, if needs be, at a more dependent

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[1] Traité de Pathologie Externe Par. Aug. Vidal (de Casses) Tome IVme.

[2] *London Medical Record.—Am. Journal Med. Sciences*, July, 1878.

[3] Op. cit.

point, is all that is required. For this purpose the application of a trephine having a sufficiently large crown to embrace the entire breadth of a rib, commends itself as the readiest and safest method, and does not hinder subsequent resection of adjacent ribs, if such procedure should become necessary.

So far as I have been able to investigate the question of priority, this operation originated in New Orleans, and is almost peculiar to this city where it has been frequently performed within the past twenty years, and with increasing favor. Indeed, since it is no longer a rarity, those who resort to it seldom keep records of their cases. This is greatly to be regretted, and I am obliged to confess that I am myself probably more at fault than anyone else. But though defective in histories of individual cases, I trust that my presentation of the subject may not be discredited or its importance underrated. To the late Professor Warren Stone, Sr. M.D., is due the credit of having first performed this or any other method of resection of the ribs for empyema, as the following history will, I think, clearly prove:[4]

Case, Charles W., æt. 17 years, was stabbed in the back with a large pocket-knife, in the hands of one of his college-mates, at a well-known institution in North Carolina, November 19, 1860. The wound penetrated the eight thoracic cavity about two inches from the spine, between the fifth and sixth ribs. Pleuro-pneumonia was the result, and very soon offensive pus, mixed with grumous blood, began to discharge from the opening. After several weeks confinement to bed the patient rallied, and was taken to Paris the following summer. There he was placed under the professional care of MM. Velpeau, Maissonneuve and Nelaton, who attempted unsuccessfully to dilate the fistula and keep the cavity cleansed. No benefit having resulted after several weeks' treatment, no operation proposed, and no encouragement to remain longer having been given, the patient was carried to his home in Mobile, Alabama, with every expectation of an early death.

A fatal result not having occurred, he was brought by his parents to New Orleans the following February, 1862, and admitted into the private infirmary, of which Professor Stone and I then had charge. At this time he was emaciated to an extreme degree, racked by cough and thoroughly exhausted by irritative fever and hectic. The right chest was somewhat contracted, and from a small fistulous opening at the site of the wound fetid pus was slowly exuding. Notwithstanding the nearness of the wound to the spine, in which situation the ribs are naturally so nearly fixed in their position that only the slightest movement can be effected, the two adjacent bones had become so nearly approximated that a No. 8 bougie could hardly be passed between. A careful examination disclosed a considerable collection of fluid in the pleural cavity. To get rid of the latter, establish free drainage and render the walls of the sac aseptic, were clearly indicated, but how to accomplish these ends after the signal failure of the three most noted surgeons of France was not so distinctly perceived. The problem was solved, however, by my distinguished colleague, when, after contemplating the situation for a few moments, he turned to me and asked what would be the objection to enlarging the fistula by a trephine applied to the rib below. The proposition met with a hearty approval, and was immediately carried into execution. But the removal of the disc of bone involving the whole breadth of the rib did not complete the operation. In consequence of the densely thickened pleura the cavity was still unopened. To divide this freely, despite the possible wounding of the intercostal artery, was the work of a moment, when out gushed an immense stream of pus, so disgusting and overpowering in its odor as almost to drive everyone from the room. After fifteen or twenty ounces of this had escaped, and the flow in a measure ceased, the cavity was washed with a tepid solution of chlorinated soda, and a small roller bandage thrust into the opening to serve both as lint and plug. No hæmorrhage followed the operation, and I have since then been convinced by additional experience that in such cases the intercostal artery in the immediate vicinity of the fistula is obliterated by contraction of the fibrinous deposit. The plug was subsequently removed twice a day, and the cavity freely injected with the antiseptic fluid. The patient's health began to improve immediately, and in less than six weeks he was upon his feet and able to go unaccompanied wherever he desired. In the meantime the sac was undergoing steady diminution in size, partly by expansion of the lung, but principally by subsidence of the chest-wall, and we indulged the hope that it would ultimately become entirely obliterated, but in this we were disappointed.

For reasons not necessary to mention, the patient left the city soon afterward, and the following year, 1863, was sent to Europe, where he was advised to continue the treatment begun at New Orleans. In 1866, I met him in Paris, and was much gratified to find him in the enjoyment of a fair state of general health, notwithstanding the annoyance of daily emptying and disinfecting the sac. I measured the latter, and found it capable of holding six ounces, and learned that the secretion amounted to four ounces daily. The ribs upon the affected side were more considerably depressed, but the respiratory murmur could be distinctly heard in front.

Mr. W. returned to Mobile in 1868, where he remained until 1880, and is now living in New York. His health is feeble, but he is able to attend to all the ordinary duties of life without special distress. In a recent letter he informs me that the cavity has undergone no material change since 1866; that it still measures six inches in capacity, and secretes from two to three ounces of pus daily. The opening is nearly an inch in diameter.

Considering that the operation was original in its conception and performance,[5] and resulted in the pre-

[4] Since this paper was read my attention has been called by Professor S. W. Gross, M.D., to an article in the *British Medical Journal* of January 21st, 1860, entitled "Case of Traumatic Empyema of sixteen months standing with Fistula, treated successfully. By Albert G. Walter, Surgeon, Pittsburg, Pennsylvania, United States." The case was a knife-wound, resulting in retro-costal abscess which opened spontaneously. December 8, 1857, one inch of the eighth rib was removed with bone-pliers. To secure better drainage two inches of the eighth and nineth ribs were removed in like manner February 11, 1858, followed by injections of tincture of iodine. On January 1, 1859, patient was reported entirely well.

[5] I am confident that Professor Stone had never heard of the suggestion of Roser, nor of the operation of Walter's, mentioned in a preceding foot-note.

servation of a valuable life, it may seem invidious to criticize it, but one cannot now shut his eyes to the fact that if two or three ribs below the one which was trephined had been subsequently resected, the probability is that complete obliteration of the sac would have occurred.

In connection with the preceding case, which I have deemed of sufficient interest to report in detail, I take the liberty of mentioning briefly another which came under my care only a few weeks later.

CASE II. Captain H., of the Confederate States Army, entered the infirmary March 15, 1862, suffering with empyema, resulting from a gun-shot wound received two or three months before. A small fistulous opening existed between the seventh and eighth ribs, an inch or more beyond their cartilages, but was not large enough to keep the cavity drained, nor could it be sufficiently dilated for this purpose in consequence of the nearness of the two adjacent ribs. Acting upon the experience I had already gained in the preceding case, I applied a large trephine to the eighth rib, immediately below the fistula, divided the thickened pleura, and thus discharged a large collection of fetid pus. The cavity was thoroughly cleansed by a weak solution of chlorinated soda, and a plug consisting of a small roller bandage pressed into the opening. The patient was sufficiently recovered to leave for his home in Texas a week or ten days afterwards with directions to continue the antiseptic injections until the cavity closed. I heard nothing from him for three years, when he presented himself at my office to show me the result. The side of the chest was somewhat contracted, but not enough to cause marked deformity; the opening was closed by a firm cicatrix, and the respiratory murmur could be heard everywhere within a short distance of this point. He informed me that complete closure occurred a few weeks after he left the Infirmary, and that since then the wound had given him no trouble whatever. From recent accounts Captain H. is still alive, actively engaged in business, and in the enjoyment of most excellent health.

Complete recovery in this case was evidently due to the fact that the empyema was localized opposite the most moveable part of the thoracic walls. The sinking in of the latter was sufficient to meet the partially expanded lung, and the cavity being kept perfectly drained, obliteration was complete.

Since the last mentioned case, which occurred twenty years ago, several of similar character have been admitted into my wards in the Charity Hospital, and have invariably undergone the same treatment, but owing to the restlessness and nomadic habits of the patients it is impossible to state with any assurance of accuracy what have been the ultimate results. In every case, however, up to the time of their leaving the hospital there were good reasons for a favorable prognosis. As one of these cases presented an exceptional complication it is worthy of special mention.

CASE.—M. Barry, æt. 27 years, came under my care in December, 1881. He had been shot from behind through the right lung a year previously, the ball emerging at the seventh intercostal space in front, a little in rear of the junction of the adjacent ribs with their cartilages. A low form of pleuro-pneumonia followed, accompanied by a free discharge of offensive pus from the two external openings, and expectoration of similar fluid from the lung. After a protracted illness, during which the right side of the chest became greatly contracted below, the wound of entrance closed entirely, and, in consequence of the approximation of the ribs, the opening of exit was reduced to the size of a No. 2 bougie. When I first saw him, he was suffering from irritative force and hectic, coughing up large quantities of fœtid pus, and so reduced in strength that he could scarcely bear to be propped up in bed for examination. I succeeded, however, in determining the presence of air and pus in the plexural sac, a tolerably free communication between the latter and the bronchial passages, and a small fistulous opening in the seventh intercostal space.

A few days after the diagnosis was completed, and in the presence of the medical class of the University of Louisiana, I made an incision downward from the fistula across the eighth rib, applied the largest trephine to the latter, and then, with a bistoury, divided an unusually densely thickened pleura. Immediately air rushed into the cavity with a deep gurgling noise, and the next instant rushed out again bringing with it a large quantity of stinking pus which bespattered everyone around, and filled the amphitheater with its nauseous odor. At the same time, and, doubtless, in consequence of the ingress of cool air into the cavity, a violent cough occurred, accompanied by a shower of the same fowl fluid mixed with blood, much to the chagrin of the assistants, who had moved out of range of the opening in the side. It was altogether a most disgusting affair. However, not to be tedious, after the escape of more than a pint of pus, and when the cough and agitation had subsided, warm carbolized water was gently injected by means of a rubber bulb syringe, care being taken not to disturb the sac, and thus force the fluid into the bronchial passages.

I need not enter into the details of the subsequent treatment, farther than to say that the injection was repeated twice a day, the opening being in the meantime plugged with a small roller bandage. The patient rallied rapidly. In a week all communication between the suppurating cavity and the air-passages was closed, and in about six weeks from the time of the operation, the cavity was so nearly obliterated that the patient thought it unnecessary to remain longer in hospital, and insisted upon being discharged. I have good reason to believe that entire recovery was completed soon afterwards.

A NEW OPERATION FOR THE CURE OF RANULA.

WITH REPORT OF A CASE. BY T. F. PREWITT, M.D.,
ST. LOUIS., MO.

Read to the Section on Surgery and Anatomy.

I do not propose to go into the literature of ranula; its mode of development, the special strictures involved, or a consideration of the differential diag-

nosis, but to call attention to a method of dealing with those cases that obstinately resist the ordinary methods of treatment, and which, so far as I am aware, has never been resorted to heretofore.

The methods recommended and practiced by surgeons at this day, consist either of the introduction of a seton, injections into the sac, or partial excisions of it.

Of these, almost all modern surgeons give preference to excisions of a portion of the sac—total excision being impracticable.

I have no experience with the seton, or injections, having practiced partial excisions in the cases that have fallen under my care, and always with satisfactory results. Having met with a case of double ranula recently, in which this measure, followed by persistent catheterization failed, it occurred to me that I might, by a plastic operation, secure a permanently patulous orifice.

Geo. McG—n, æt. 15, was brought to me May 6, 1882, by his brother-in-law—himself an intelligent physician, with a swelling under the left lower maxilla, nearly as large as a goose-egg. It fluctuated freely, some portions of it seeming hard, however, and projected also into the mouth under the tongue, though the swelling here was not very great. A diagnosis of ranula was made, and a portion of the cyst wall in the floor of the mouth excised. A quantity of clear, transparent mucoid fluid escaped, spurting out several feet as the cyst was incised.

In the course of two or three weeks this had contracted, and threatened to close, and catheterization was resorted to.

In the meantime, a ranula had appeared under the tongue upon the right side, with translucent, bluish, thin walls, but not projecting beneath the jaw. This also was treated by excision of a portion of the cyst wall.

In July the young man ceased to present himself; the orifice closed, the sacs rapidly filled, and Dr. L. again brought him to me in an alarming state from threatened suffocation. Both ranulæ were swollen and painful. Upon the left side the swelling extended well down towards the clavicle and sternum, and across the trachea in front. Upon the right side the ranula, was greatly swollen, meeting with that upon the left side under the chin, in a continuous swelling, from the angle of the jaw upon one side around to the opposite angle. Both inspiration and expiration were obstructed—the young man was flushed and feverish. From the rapidity of the occurrence of the symptoms, and their increasing gravity, it seemed as though tracheotomy might become necessary.

I incised the cysts freely, permitting the free escape of the accummulated fluids, and directed hot fomentations to be persistently applied. This gave speedy relief to all the urgent symptoms.

As contraction took place, I again resorted to catheterization, with the view of preventing reclosure. This was persevered in for two or three months, and was more effectual upon the left side, for the reason that the bougie, a soft conical rubber about 15 French, could be passed down for two inches and could be felt below the margin of the jaw. Upon the right side a probe only could be used, and when its use was intermitted for a few days, it would close completely. I determined, therefore, to make a permanent opening by a plastic operation on that side. Carefully dissecting off the mucous membrance of the mouth over the cyst, denuding a surface as large as a nickel, I then incised the cyst-wall, turned it over, and tacked its free edge to the border of the mucous membrane of the mouth with fine silk sutures, thus, as it were, binding the opening in the cyst with mucous membrane, and interposing an effectual safeguard against its closure.

Union by first intention took place, the stitches were removed upon the third day, and an orifice was secured that has remained patulous to this time.

This was in November last. The young man became irregular in his attendance, and finally ceased to present himself to have the left side catheterized. On the 1st of April he came to me with considerable accumulation on the left side, and the orifice closed. I repeated the operation on that side, with a like fortunate result, and now, two months after the last operation, the openings are equally patulous upon the right side and upon the left, and he has no trouble whatever from re-accumulation of the fluid.

RECORD OF PROCEEDINGS OF THE ANNUAL MEETING OF THE ASSOCIATION OF AMERICAN MEDICAL EDITORS IN CLEVELAND, JUNE 5, 1883.

President N. S. Davis called the meeting to order in Case Hall, Cleveland, Ohio, Tuesday evening, June 5, at 7:30 P. M. Dr. John V. Shoemaker, the Secretary, read the minutes of the previous meeting, which were adopted. The following members and the journals which they represent were then registered by the Secretary:

Dr. N. S. Davis, Chicago, Ill.; Dr. W. C. Glasgow, *St. Louis Courier of Medicine*, St. Louis. Mo.; Dr. A. N. Bell, *Sanitarian*, New York; Dr. C. H. Hughes, *Alienist and Neurologist*, St. Louis, Mo.; Dr. A. B. Palmer, *The Physician and Surgeon*, Ann Arbor, Mich.; Dr. C. B. Stemen, *Fort Wayne Journal of Medical Science*, Fort Wayne, Ind.; Dr. John V. Shoemaker, *The Medical Bulletin*, Philadelphia, Pa.; Dr. Frank Woodbury, *Medical Times*, Philadelphia, Pa.; Dr. H. O. Marcy, *The Anatomical and Surgical Annals*, Boston, Mass.; Dr. Thos. J. Gallagher, *Pittsburgh Medical Journal*, Pittsburgh, Pa.; Dr. L. S. McMurtry, *Louisville Medical News*, Louisville, Ky.; Dr. W. M. Carpenter, *Medical Record*, New York; Dr. H. H. Mudd, *Weekly Medical Review*, St. Louis, Mo.; Dr. Leartus Connor, *Detroit Lancet*, Detroit, Mich.; Dr. W. C. Wile, *New England Medical Monthly*, Sandy Hook, Conn.; Dr. Wm. Brodie, *Therapeutic Gazette*, Detroit, Mich.; Dr. Deering Roberts, *Southern Practitioner*, Nashville, Tenn.

On motion, the President appointed a committee to select officers for next year. Drs. Wm. Brodie, A. B. Palmer and L. S. McMurtry, the committee, reported the following: President—Dr. Leartus Connor; Vice-

President—Dr. Thos. J. Gallagher; Secretary—Dr. John V. Shoemaker.

On motion, the Secretary was instructed to cast the ballot, and he announced the officers already reported by the committee.

The time having arrived for the President's annual address, Dr. N. S. Davis then spoke on the "Present Status and Tendency of the Medical Profession and of Medical Journalism in this Country." At the conclusion of his remarks, Dr. Davis stated that the Association had concluded to include the two meetings already announced upon this occasion, and the next address in order would be by Dr. H. O. Marcy, of Boston, Mass. Dr. Marcy, upon being introduced, spoke upon "Journalism Devoted to the Promotion and Concentration of Medical and Surgical Science in Special Departments."

On motion, the thanks of the Society were returned to Drs. N. S. Davis and H. O. Marcy for their admirable and instructive productions, with the request that they be furnished to the editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION—should it be established—for publication.

Dr. Deering Roberts presented the following resolution:

Resolved, That this Association recommend Dr. N. S. Davis, of Chicago, to the American Medical Association, as being the most suitable editor for the JOURNAL which they shortly propose publishing.

The resolution was unanimously carried.

On motion, the Secretary was instructed to arrange a suitable programme at the next place of meeting, Washington, D. C., in 1884.

JOHN V. SHOEMAKER, *Secretary*.

MINUTES OF THE JUDICIAL COUNCIL OF THE AMERICAN MEDICAL SOCIETY.

CLEVELAND, OHIO, June 5, 1883.

The Judicial Council met in the private office of Dr. X. C. Scott at 10 o'clock A.M. in accordance with the adjournment of last year.

Present—Doctors J. S. Billings, J. M. Brown, Wm. Brodie, N. S. Davis, N. C. Husted, Wm. Lee, D. A. Linthicum, J. C. Reeves, M. Sexton, A. B. Sloan, X. C. Scott, J. M. Toner, J. H. Warren, J. K. Bartlett.

The first business in order, election of officers for the year, resulted in the choice of N. S. Davis, President; J. K. Bartlett, Secretary.

No papers having been referred, and there being no unfinished business from last year, the Council then adjourned, to meet the next morning at nine o'clock.

Wednesday, June 6.—Council convened at 9 A.M. Papers from several State and local Medical Societies which had been referred, and which reaffirmed adherence to the Code of Ethics, were read, and ordered to be placed upon file.

A petition from Dr. D. W. Day had also been referred, asking for a rehearing in his case, which was adjudicated last year. After examination of the papers, the following was unanimously adopted:

Resolved, That the petition of Dr. D. W. Day be returned, with leave granted to accompany said petition by a written statement of the character of the new evidence which he proposes to introduce, and that any action in the case be deferred until the opening of the session of next year, on account of the impossibility of notifying all parties concerned during the present session.

In the case of Dr. E. P. Cook, who, before signing the certificate of application, erased the clause which had been inserted by the Secretary of the Association as a substitute for the registry book formerly used. The Council was of the opinion that Dr. Cook misunderstood the import of this addition, and Dr. Davis was requested to explain the subject to the Association, which was done by a verbal report.

A letter from Dr. D. H. Goodwillie, of New York to the Chairman of the Committee of Arrangements, which had been referred to the Council, was read and laid upon the table. Council then adjourned to meet at 9 o'clock A. M. of the next day.

Thursday, June 7. Council met according to adjournment. A protest against the registration of Dr. D. H. Goodwillie, signed by two delegates from the New York Academy of Medicine, and which had been referred to the Council, was read, and the letter of Dr. Goodwillie taken from the table; after a full consideration of the subject, it was unanimously

Resolved, "That the evidence before us in the case of Dr. D. H. Goodwillie is sufficient for adjudication;" also,

Resolved, "That decision in this case be deferred until the next Council session, and that the Secretary be directed to notify Dr. Goodwillie that these papers are before us, and will be acted upon at the session of the Council on Friday morning at 9 o'clock.

Three letters from individual members of the Association which had been referred, were read, and ordered to be placed upon file. The Council then adjourned, to meet at 9 o'clock on Friday morning.

Friday, June 8. Council assembled at 9 A. M. The unfinished business of the preceding day was resumed. The letter written by Dr. Goodwillie was read while he was present, as also the protests against his registration; he was asked if the letter fully and correctly expressed his present opinion, and replied that it did. After his withdrawal, the Council unanimously

Resolved, "That in the case of Dr. D. H. Goodwillie, who signed under protest the clause printed upon the registration blanks, which declared adherence to the Constitution, Bylaws, etc., of the Association, his registration be cancelled, and the annual dues paid by him be returned."

There being no farther business, the Council adjourned, to meet at 10 o'clock A. M. on the first day of the session of the Association at Washington, D. C., May, 1883.

J. K. BARTLETT,
Secretary of Judicial Council.

MEMBERS OF JUDICIAL COUNCIL.

1884.—Wm. Brodie, Mich; R. B. Cole, Cal.; H. D. Holton, Vt.; D. A. Linthicum, Ark.; A. B. Sloan, Mo.; J. M. Toner, D. C.; E. W. Clark, Iowa.

1885.—J. M. Brown, U. S. A.; N. S. Davis, Ill.;

N. C. Husted, N. Y.; Wm. Lee, Md.; J. C. Reeves, W. Va.; X. C. Scott, Ohio; M. Sexton, Ind.

1886.—W. O. Baldwin, Ala.; J. S. Billings, U. S. N.; F. D. Cunningham, Iowa.; E. Grissom, N. C.; H. O. Marcy, Mass.; N. W. Miller, Marine Hosp.; R. N. Todd, Ind.

MEDICAL PROGRESS.

Two Deaths during the Administration of Anæsthetics.—Mr. J. H. Lee Macintire, Medical Superintendent, Bristol Royal Infirmary, writes:

"H. C., male, aged 54, was admitted to the Bristol Royal Infirmary, December 30, 1881, suffering from a strangulated inguinal hernia of sixty-four hours' standing. He had vomited almost incessantly from the first, and for the last twelve hours the vomited matter had been fæcal. On admission his tongue was moist, his pulse weak but regular, and his aspect somewhat pinched. Chloroform was administered preparatory to an attempt at reduction by taxis, and everything went on well for the first minute and a half, a little over one drachm being inhaled, and this amount was divided into three parts. He then commenced to struggle a little, and his pulse was noticed to have improved, when he was seen to be about to vomit. The vomited matter measured almost a pint, and was stercoraceous and very fluid. Loud tracheal râles were now heard, and the breathing for the first time became embarrassed. He was immédiately turned over, when nearly two quarts of fluid were ejected. His pupils were now widely dilated, his pulse failed, and he became cyanosed. Artificial respiration, inversion, cold affusion, and dragging forward of the tongue were at once tried; air entered the lungs freely, there were no tracheal râles, and the pupils became contracted. He now vomited again, or, rather, some more fluid poured out of his mouth. Attempts to resuscitate him were persisted in for over twenty minutes, but without avail. From the first arrest of pulse and respiration, neither heart-beat nor voluntary attempt at respiration was noticed. The first vomit occupied about a minute. The *post mortem* examination showed the heart healthy, aorta slightly atheromatous, kidneys granular, and a small quantity of food, which appeared to be partly digested milk, and which was about as large as a pea, was lodged just below the rima glottidis.

M. T., female, aged 45, who had been in the ward some days with an abdominal tumor, was, on April 19, 1883, examined under the influence of an anæsthetic mixture consisting of one part or chloroform to three parts of ether. She was known to have chronic bronchitis, and was suspected of phthisis at the right apex. She had taken some beef-tea and egg a short time before the examination. She took the anæsthetic very well, becoming unconscious in three minutes, and remaining so for ten, when her breathing was noticed to be growing shallow, but her pulse, color, and pupils remained unaltered. She took three respirations, each more shallow than its predecessor, and gave signs of being about to vomit. She was just about to be turned over on her left side, when her breathing stopped, whilst her heart could still be seen acting. Her pulse then failed, her face became livid, and her pupils about two-thirds dilated. Inversion and artificial respiration were immediately tried, and air entered the lungs freely, with a total absence of tracheal râles. The pupils were now noticed to be about three-fourths dilated, and some half digested liquid food oozed out of her mouth. In case any might have entered the larynx, although there was no reason to suspect such an accident, tracheotomy was performed. Artificial respiration was kept up for half an hour, and inhalations of nitrite of amyl, injections of ether, cold affusion, and an enema of brandy were also unsuccessfuly tried, the patient showing no sign of returning animation from the first, with the exception of closing her jaws firmly about five minutes after the commencement of artificial respiration. *Post mortem* examination showed the heart-vessels and brain to be healthy, and there was no food in the air passages. The abdominal tumor was due to tubercular peritonitis, and there was general bronchitis, and some tubercle was found in the apex of the right lung.

In both cases, the anæsthetic was administered on a flannel mask which covered the nose and mouth.—*British Medical Journal.*

Cannabis Indica; a Valuable Remedy in Menorrhagia.—Mr. J. Brown, of Bacup, observes:

"Indian hemp has been vaunted as an anodyne and hypnotic, having the good qualities of opium without its evils. Also in dysmenorrhœa and iusomnia it has not proved of much benefit. The drug has almost invariably produced some marked physiological effect, even in small doses. Text-books give the dose as ten minims and upward, bnt five minims is the largest dose that should be given at first. If bought from a good house, the drug is not inert or unreliable. A drug having such marked physiological action ought to have a specific use as a therapeutic agent. Indian hemp has such specific use in menorrhagia—there is no medicine which has given such good results; for this reason, it ought to take the first place as a remedy in menorrhagia, then bromide of potassium and other drugs. The *modus operandi* I cannot explain, unless it be that it diverts a larger proportion of blood to the brain, and lessens the muscular force of the heart. A few doses are sufficient; the following is the prescription: ℞ tincture cannabis indicæ ♏ xxx; pulveris tragac. co. ʒ j; spiritus chlorof. ʒ j; aquam ad ʒ ij. One ounce every three hours. Four years ago I was called to see Mrs. W., aged forty, multipara. She had suffered from menorrhagia for several months. Her medical attendant had tried the ordinary remedies without success. Indian hemp was given as above. Its action was speedy and certain. Only one bottle was taken. She was afterwards treated for anæmia, due to loss of blood. Twelve months after this my patient sent for a bottle of the "green medicine," I learned afterward that she had sent this medicine to a lady friend, who had been unsuccessfully treated by another medical man for several months for the same complaint. It proved equally successful. The fail-

ures are so few, that I venture to call it a specific in menorrhagia. The drug deserves a trial. It may occasionally fail; this, however, is not to be wondered at in a complaint due to so many different causes, and associated with anæmia and other cases of plethora."

Robert Batho, M.D., M.R.C.P., Castletown, Isle of Man, writes in reference to the same subject: "Considerable experience of its employment in menorrhagia, more especially in India, has convinced me that it is, in that country at all events, one of the most reliable means at our disposal. I feel inclined to go further, and state that it is *par excellence* the remedy for that condition, which, unfortunately, is very frequent in India.

I have ordered it, not once, but repeatedly, in such cases, and always with satisfactory results. The form used has been the tincture, and the dose ten to twenty minims, repeated once or twice in the twenty-four hous. It is so certain in its power of controlling menorrhagia, that it is a valuable aid to diagnosis in cases where it is uncertain whether an early abortion may or may not have occurred. Over the hæmorrhage attending the latter condition, it appears to exercise but little force. I can recall one case in my practice in India, where my patient had lost profusely at each period for years, until the tincture was ordered; subsequently, by commencing its use, as a matter of routine, at the commencement of each flow, the amount was reduced to the ordinary limits, with corresponding benefit to the general health. Neither in this, nor in any other instance in which I prescribed the drug, were any disagreeable physiological effects observed.

I could say a few words in its favor, as to its action in allaying irritative cough, but I prefer confining myself to a point on which experience has left me no room for doubt."—*British Medical Journal.*

SHORT SIGHT IN SCHOOL CHILDREN.—Fleet Surgeon Henry Hadlow, R. N., gives a very useful lesson in an article in the *British Medical Journal* of May 19, which is the result of his inquiries into the management of the Greenwich Hospital School. At this school boys were admitted to prepare for the Navy. At the age of thirteen they were submitted to a special physical examination, which included the special test for eye-sight by Snellen's types, which they were required to read at the full distance; consequently every boy in the school above the age of thirteen years must have had perfect vision at this period. At fifteen and a half years of age out of 1,074 of these same boys, no less than sixty were rejected for the Royal Navy on account of defective sight, the cause in almost every case being simple myopia; that is to say, that in two and a half years five and a half per cent. developed a degree of myopia that unfitted them for a service, for which they had undergone a long and expensive training. Further, in what is termed the select school and special class, out of one hundred boys there were seventeen rejections, the myopia also being of a higher grade than that found in the rest of the school.

This is adding evidence to an evil to which our attention has previously been called—that short-sightedness is developed during school life, and that it is found most frequently and of the highest grades amongst the most advanced classes; but it is well to follow Mr. Hadlow in his further examination into the condition of the school itself as regards the production of this affection; because, as he says, not only is asthenopia or myopia a most serious disqualification for many conditions of life, but we have every reason to believe that the predisposition to become short-sighted is hereditary, and that the children of short-sighted parents have a much greater tendency to develop the same defect, if placed under unfavorable conditions, than others. He found the desks and stools of the same height for boys of all sizes and ages, with no backs, narrow seats placed much too far from the edge of the desk, and want of proportion between the height of the two. Some of the rooms were so dark in corners—and very large corners, too—that it would be impossible on a winter's day for the boys to see to do their work properly without gas; further, in every case the desks were so placed that the boys must sit with their backs to the light.

This must not be considered as the present condition of the school referred to, for it has been remedied in a most complete manner. The desks and chairs are graded to suit the size; there is a board behind on the chair to support the loins just above the hips; the edge of the desk is perpendicularly above the the front of the seat, and the inclination of the desk can be altered from 20° for writing to 40° for reading, whilst a foot-board is attached, on which the feet rest naturally and easily. Obstructive partitions have been removed and windows inserted, to give not only a sufficiency of light, but from above and from the left.

But with all these improvements, they fail in many cases where the continuous application to daily study is too prolonged; as in a report on the education of the young from Alsace-Lorraine, where no fewer than eighty per cent. were found physically unfitted for the army. With them, boys of thirteen have, on an average, about eight hours' study a day; here the extreme prevalence of myopia is well known.

FOREIGN BODY IN THE URETHRA. Dr. George Hunter, M.D., Linlithgow, writes:

"An elderly gentleman, the subject of dysuria from prostatic enlargement, thought to aid the efforts of his bladder in its evacuation by insinuating the rounded head of his wife's veil-pin into the orifice of his urethra, and thereby opening up the passage. To his dismay, in its descent downwards it slipped from his fingers, and the point of the pin disappeared from his sight. His attempts at removal only caused it to make its way further back, and soon a discharge of blood from the meatus, and urgent but ineffectual attempts to pass urine, alarmed him, and induced him to send for me. On my arrival, I could just make out the head of the pin in the membranous urethra in front of the prostate, and could feel the point anterior to the scrotum. To remove it, I fixed the head by pressing on it from behind forwards, and then impaled the

urethra against the point. By steady pressure and traction on the point as soon as it emerged from the under surface of the penis, the whole length of the pin was pulled through, only the head remaining in the urethra. The point was then depressed towards the perinæum, and by compressing the flacid penis, in its longitudinal axis, the round head of the pin was easily passed through the meatus, and the entire pin withdrawn. In its removal, not a drop of blood was lost, and the puncture remaining was not more severe than that resulting from the use of the ordinary hypodermic needle. Beyond enjoining rest and quiet for the first twelve hours, nothing further was prescribed, and my patient was next day in his usual health."—*British Medical Journal.*

Case of Acute Peritonitis Following Intestinal Perforation.—Dr. William Julius Mickle, of Bow, describes the following case:

"M. M., aged 45, formerly a soldier in the 17th regiment, was a helper at a laundry for some years, and had made no complaint of any malady whatever, although some mitral obstruction had been made out. Early one morning, complaining of constipation, he was given an aperient. After breakfast the bowels were freely moved. Then, seeming well, he worked all day until about 4:30 P.M., when he felt abdominal pains, or "cramps," as he called them, coming on, returned to his ward, laid himself down, and looked pale. Next, he was doubled up, groaning, breathing noisily, and complained of "cramps" over the belly, which was tender, and which he would not allow one to examine. The pain was obviously intense. The pulse was frequent, and variable in this respect; somewhat sharp. Tincture of opium was given internally, and a light hot poultice and turpentine were applied to the abdomen. At 9 P.M., there was slight vomiting of food and mucus, and later of a greenish fluid.

Next morning, he lay either on his back or on the right side, with the knees drawn up. The pain was continuous, and he stated it to be worst along the middle line; the tenderness, however, was highly marked over the cæcum; and in both flanks were slight dulness on percussion, and doubtful obscure fluctuation. He was eructating and then spitting out in mouthfuls, a dark-greenish, flaky and flocculent, soup-like material, with brownish, soft, lather-like flakes floating on the surface. Temperature 99.7°; pulse 117, soft, feeble; respiration 38, somewhat labored, moaning. No urine was passed. The bowels were not moved; the tongue was moist, with a greenish and brownish coat. The tips of the ears, nose, and fingers were chilly. The eyes were heavy; the face was of leaden hue. The pain was heavy and continuous, with exacerbations, during which it resembled the piercing of knives, There was no sign of tumour, strangulation, or intussusception of bowels.

I ordered him to have one-third of a grain of morphia hypodermically; also to take, each hour, five minims of tincture of belladonna, one minim of dilute hydrocyanic acid, and one-sixteenth of a grain of morphia. He took three doses of this. Half an ounce of milk was given every half-hour. At 1:30 P.M., his nose was cold, his features collapsed; pulse feeble; prostration was advancing. At 3 P.M., he was somewhat drowsy; respiration varied from 18 to 24, and the pulse from 110 to 120, feeble, soft, small, becoming imperceptible. The pupils were moderately contracted. The patient, in reply to inquiries, said that the pain was relieved. After this, he gradually became comatose, and the respiration irregular, jerking, as if by several contractions of diaphragm; and later, hiccough came on. Brandy was given by the mouth, and it and carbonate of ammonia by the rectum, while heat was applied to the feet. The pulse remained at from 110 to 120, and death occurred at 5 P.M., or twenty-four hours and a half after the first complaint of abdominal pain.

Necropsy.—Omitting most of the parts examined, it need only be said that the abdominal cavity contained some turbid fluid, partly escaped from the bowel, and with sanguineo-purulent material floating in it. These were mainly on the left side of the abdomen. The parietal peritoneum was of an almost uniform scarlet redness. The great omentum was converted into a red fleece, the under surface of which was smeared in parts with purulent fluid. The appendices epiploicæ were smeared in a similar way, as were also some coils of the small intestine, the other coils being slightly lymph-glued together. There was general inflammatory redness of the outer coat of the exposed coils of intestine. In the upper part of the small intestine were much yellow mucus and semifæcal matter. In the descending colon and rectum was patchy redness, and in parts slight excoriation. In the lower part of the sigmoid flexure was a perforating ulcer, with bevelled edges and sloughy surface, which was open through an appendix epiploica into the abdominal cavity. Another ulcer with greenish edges was just beginning to perforate. The heart contained clots and treacly-fluid blood; the endocardium was deeply blood-stained; there was mitral stenosis; the mitral valve was thickened, calcareous, and deformed. There was some hypertrophy and dilatation, especially of the left auricle. The heart weighed fifteen ounces. Some large gall-stones were found in the gall-bladder.

Remarks.—As to the duration of this case—at least twenty-four hours and a half—it may be said that, writing of peritonitis, Dr. Habershon stated that instances of intestinal perforation are generally fatal in from five to ten hours; and Dr. J. R. Wardell mentions that, in his cases, death occurred in from seven to twenty-three hours, and cites duration-periods from other authors varying from four to one hundred and five hours.

Possibly constipation, or passing gall-stones, led to the irritation and ulceration of old cicatrices in the colon, results of disease contracted when campaigning long before."

British Medical Journal.

Remarkable Monstrosity.—Dr. Mulvaney writes:

"On November 2, my late partner, Dr. H. C. Linden, sent for me to a case of a primipara, æt. 28, who

had been some hours in labor. It was a breech presentation, and favorable progress had been made until the pelvic outlet was reached. There the head became jammed tightly, and during the next two hours, did not advance in the smallest degree. As the pains were ceasing, notwithstanding the administration of ergot, it became necessary to deliver instrumentally. Several attempts at extraction by forceps proved futile, and, as exhaustion was threatened, the blunt hook was employed, and after an hour's hard work, delivery was accomplished. The child was a full-grown anencephaloid male; life was extinct but very recently. The bones of the face were normally developed, but there was no calvarium. The cerebral substance was wanting, and its place was filled with bloody serum and a material which looked like a placenta; to this the placenta proper was attached by its membranes. It was very large, measuring 6¼ in. by 3½ in., and was deeply fissured at its anterior third. Two abortive cerebellar lobes were present. At the upper portion of the spine there was an opening into the spinal canal, from which sprang a lobulated body. Four cords were present, three focussing at this point; one running from the placentoid cerebral snbstance, the other from the placenta, and the third joining the cord proper, a few inches from the umbilicus; the fourth passed from the placenta in the usual way, and presented a slight degree of fatty degeneration. It was rather large. The other cords had undergone fatty degeneration to a great extent. Being rather pressed for time, we were obliged to be content with a cursory examination."—*British Medical Journal.*

TRANSPOSITION OF VISCERA.—W. P., a sign writer, died, aged 40, of general paralysis of three years' standing. During life the transposition of the areas of percussion-dulness of the liver and spleen had been noticed. Heart showed aortic ventricle on right side thicker, stronger, and forming cardiac apex; pulmonary ventricle on left side, auricle receiving systemic veins on left side; auricle receiving pulmonary veins on right side—thin septum between, with patent foramen ovale. Aortic arch directed towards the right, curved down vertebral column and descended on its anterior and right aspect, through the thorax. Gullet passed down left anterior aspect of vertebral column, crossed to right below to gain œsophageal opening in diaphragm. Left lung had an imperfectly divided off middle lobe; right lung had made imperfect middle lobe, spleen in right hypochondrium. Liver had larger lobe in left hypochondrium and epigastrium, smaller lobe extending rightwards to spleen. Stomach had cardiac opening and cardiac end to right, and pylorus to left, of middle line. Duodenum to left end of ileum, the cæcum, and the appendix vermiformis were in the left inguinal region. Ascending colon left, descending colon right, sigmoid flexure in right iliac fossa, and rectum slightly to the right side. Kidney on the left weighed 5 ozs., on the right 4½ ozs.—WILLIAM JULIUS MICKLE, M.D, *British Medical Journal*, May 19.

FOREIGN BODY IN URETHRA.—J. B. Carter, æt 42—admitted into hospital—the day before had been drinking heavily, and in the evening was seized with severe pain in the perineal region, accompanied with some hæmaturia. On examination, a foreign body could be felt lying along the under side of the penis, from its lower half towards the perineum, and about the middle of the penis a sharp point was discovered. A small incision was made through the skin over it, and the point of a large black pin was then forced through, seized by a pair of forceps, and drawn out; it was between three and four inches in length. The head of the pin was then found intact in the urethra; the point of the pin was therefore depressed, and the head pushed up through the urethra and drawn out through its orifice. A catheter was passed, and left in the bladder for twenty-four hours, and the wound dressed with carbolic oil. Blood was passed in the urine several times afterwards. No urine escaped by the wound, and at the end of the week the man was sent out, cured.—WM. CURTIS, *British Medical Journal.*

THE OXYTOCIC ACTION OF QUININE.—Mr. Hartigan, M.K.Q.C.P., of Hong Kong, writes:

"In three different cases, I have had on several occasions to discontinue the use of quinine, because it brought on "labor-pains," though the doses were small, varying from three to five grains. In one of these, during a previous pregnancy, another medical man used quinine, and discontinued it for a similar reason. All three were in fair general health, suffering only from slight malarious fever, and had never aborted. One case has come under my notice, in which abortion took place, without apparent cause, after a ten-grain dose of quinine. The patient was the mother of several children, had not previously aborted, was in good health, and took the quinine to cure facial neuralgia. I know of another case of abortion occurring under similar circumstances after quinine. This action of the drug is known to the Chinese, who take it (I am told with success) for the purpose of producing abortion, following its use by copious draughts of hot tea. I have myself heard a Chinese 'amah' (*i. e.*, female servant), recommend it. Quinine certainly, in some cases, increases the menstrual flow."—*British Medical Journal.*

JEQUIRITY (the abrus precatorius) IN GRANULAR LIDS.—Dr. W. A. Brailey, Ophthalmic Surgeon, Evelina Hospital; Assistant Ophthalmic Surgeon, Guy's Hospital, gives the treatment of three cases (*British Med. Jour.* May 19), by this drug, introduced from the natives of Brazil, by DeWecker of Paris. The seeds are used in the form of a strong infusion, and applied to, or between the lids, thrice daily, until a severe conjunctivitis of a purulent or diphtheritic type is set up. He finds it to diminish, very considerably, the pain and photophobia, and to have a decided influence in cleaning up the cornea, and could not succeed in inoculating into the sound eye the ophthalmia produced by this agent.

ON THE LOCAL USE OF ANTISEPTICS AFTER LABOR AND ABORTION.—Dr. W. Gill Wylie, in a paper read before the Medical Society of the County of New

York, and reported in the *N. Y. Med. Journal*, June 23, gives it as his practice: 1st, to make a vaginal examination, in all cases, some weeks before labor, and, if there is any leucorrhœa, to give warm vaginal douches, 1 to 50 sol. acid carbol. twice daily, and as soon as labor begins, wash the vagina and vulva with this solution.

2nd. To prepare the room by the removal of all useless and old stuffy furniture, and to disinfect everything with the spray of carbolic acid solution. The linen so treated is changed twice every day, and two sets of blankets are aired and used alternately. All instruments and hands used are first washed in sol. (1 to 20) acid carbol.

3rd. When labor begins, the spray is set going, and after labor, every napkin is carbolized, or carbolized muslin or oakum is used to catch the lochia, and changed, according to the discharge, every hour or two, night and day.

4th. Just after labor, the parts are thoroughly washed with a 1 to 50 sol. acid carbol., and vaginal douches are given from two to four times a day, and kept up for six or ten days, as required.

5th. The test required is the total absence of any odor pertaining to the lying-in chamber.

In thirty-six cases so treated by him, none had a rise of temperature over 102 F. at any time. He refers to four cases of abortion, detailing two of them, and considers, 1st, that septic matter must be excluded with great care; 2nd, that perfect drainage is very essential, as versions, and especially flexions, may cause retention of the lochia, and that contraction and swelling of the os internum very frequently is an active cause in preventing a constant and free drainage; 3rd, that when septicæmia has begun within ten or twelve hours after the first chill or high temperature, almost all cases may be cured by perfecting the drainage, and by washing out the cavity of the vagina or uterus by frequent douches of sol. (1 to 40, to 1 to 20) acid carbol.

He gives two instances of the dangers of intra-uterine injection. In one case, where there were symptoms of septicæmia after an operation on the cervix, very great shock followed an intra-uterine injection, but a very small catheter was used, and when the bed-pan was removed, not an ounce of the solution was in it, nor had it escaped on the bed, for the catheter undoubtedly entered the Fallopian tube, and the fluid was freed into the abdominal cavity. The patient recovered in eighteen months, after suffering during that time with an extensive pelvic abscess. In another case, a patient with puerperal fever was rapidly sinking, hav ng been brought into the hospital eight hours previously with a very high temperature. One carbolic intra-uterine injection had been given, which was followed by a slight convulsion and a fainting turn, temp. 105°; pulse 130, with profuse perspiration, etc. The injections were kept up every half-hour. The woman rapidly improved, and made a good recovery. If a large tube is used after the os internum is well contracted, the injection may distend the uterine cavity, be forced through the Fallopian tube into the peritoneal cavity, or a clot may be forced into a vein or through a sinus, and do harm. He recommends a gum elastic catheter, with a ten and a half inch mark to limit the length introduced into the uterus.

In the discussion on this paper, Dr. Mundé directed attention to the fact that in all cases of puerperal septicæmia, there was a time when intra-uterine injections not only did no good, but were even positively injurious: 1. In cases where the lochia were not at all offensive, and the seat of infection seemed already to have spread to the parametric tissues. 2. Where the injections had been used faithfully for 48 to 72 hours with little or no benefit—in the latter they seemed to provoke a traumatic rise of temperature, and sometimes to be followed by more or less hæmorrhage.

Dr. McLean, to avoid the dangers of intra-uterine injection, used a continuous stream as from the fountain syringe, and with a soft catheter.

Cigarette-Smoking.—This habit is receiving some consideration at present from the medical press. The New York *Medical Journal*, of June 23, in an editorial, considers that there is no just ground for looking upon cigarettes, used with proper precautions, as in any way more capable of doing harm than either cigars or tobacco. It is asserted, says the editor, that the paper used in making many brands of cigarettes contains matter that is poisonous, and arsenic is usually mentioned in this connection. If it were really present serious and unmistakable instances of arsenical poisoning would long before this have been traced to cigarettes. Another allegation is that cigarettes are sophisticated with some preparation of opium. If we compare the market value of tobacco with that of opium, we shall find that it will not suit the purposes of the falsifier to adulterate a cheap commodity with one that is expensive. Cigarettes furnish an inducement to more frequent smoking it is true, but it takes a number of cigarettes to equal a cigar in narcotic effect, and being cheaper they are more likely to be smoked in part only than is the cigar, and the nicotine is more apt to accumulate in the unsmoked end of either for absorption in larger quantities. One fault, that of inhalation into the lungs, and of exhalation through the nostrils, is more apt to belong to the cigarette smoker than to one who uses the cigar or pipe, and thus to increase the extent of absorbing mucus membrane.

The London *Lancet*, May 26, considers that if cigarettes were smoked as in the East, where, according to Sir Henry Thompson, Turkish ladies consume fifty or upwards in a day by taking a few whiffs and then throwing the cigarette away, perhaps no harm would ensue; but to take a cigarette between the lips and keep it there until smoked out, desposits a larger quantity of nicotine from the finely-cut leaf than that thrown by the smoke of a cigar or pipe. The sphygmographia tracings are more characteristic in the cigarette smoker than in others, of the depression produced by tobacco on the vaso-motor center and nerves. Further the dryness of the mouth and throat and the consequent demand for "brandy and soda," or some other stimulating beverage, is more apt to follow the use of cigarettes than of cigars or

pipes. Sir Henry Thompson, it seems, has not found it beneath his dignity to invent a form of cigarette-holder which opens transversely in the middle and admits of being stuffed with cotton-wool, which takes up the nicotine from the smoke in passing through it, and can be frequently renewed. Used in this way he regards the cigarette as the least potent, and therefore the least injurious, form of tobacco smoking.

A CASE OF ADDISON'S DISEASE.—In the report of the Western Infirmary, *Glasgow Medical Journal* June, a case of this disease is detailed at considerable length in a blacksmith, æt. 38, who attributed the cause of his sickness to a strain received while lifting, and giving him a constant pain in the right hypochondriac region. The discoloration of the skin came on very gradually soon after this, and his friends at first accused him of not having washed his face thoroughly. The strain was received in January, 1882; in July the skin became very dark in color. In August had inflammation of and purulent discharge from left lower jaw. In September diarrhœa. In December an attack resembling typhoid fever. In January, 1883, was taken with headache and shivering, followed by pains in the right side of the back, extending down the right groin and into the right testicle. This attack lasted three weeks, after which he gained flesh and got stronger. At present is not emaciated, skin cool and soft; temperature generally 98. No alteration of blood seen in microscopic inspection; bowels regular; appetite good; tongue appears as if slightly stained with ink; mucous membrane inside lips of a mottled, brown color, and on the inner side of each cheek opposite the teeth the pigmentation is of a blackish tinge. The pharyngeal mucous membrane is congested but not pigmented; has always been healthy; had scarlet fever when young; denies any venereal disease; cicatrices in right groin where he had a suppurating bubo twenty years previous; takes whisky freely; no hereditary taint discovered.

In the face he has the complexion of an Arab. The discoloration is especially distinct on the alæ of the nose; also below each eye. The conjunctivæ appear very white. The brown color of the face shades off and becomes lighter in those parts that are covered. The skin of his neck is very dark behind but gradually gets of a lighter shade as we pass forwards. At the back of the neck are two small cicatrices caused by burns; these are discolored slightly, but around them is a distinct zone of skin where the pigment is more abundant. A streak of pigmentation runs down the lower part of the back in the middle line, the color being deeper over each spinous process. In the lower part of the lumbar region, on the right side, there is an area of the skin where the pigment is very abundant; it corresponds to the place where a turpentine stupe was applied. The skin is discolored above each clavicle where the braces cross. The skin on the chest is very slightly tinged, becoming more marked as we approach the shoulders, and very dark in the axillary fold. The nipples are of brownish black color, and there is a slight secondary areola. The color becomes darker on the abdomen; there is a narrow streak of pigment from the xiphoid cartilage to the pubes; the navel is darker than usual; the scrotum is the part most deeply pigmented; the penis being also dark brown; the legs are pigmented more posteriorly than anteriorly, about the malleoli and over the dorsi of the feet; the right arm is more marked than the left, the inner side than the outer side; the skin around the olecranon is deeply pigmented. The backs of the hands look as if stained by the juice of walnut bulbs; the palms are almost free from pigment. The color of the skin over the body is darker when the surface is cold.

NEW INVENTIONS.

AN INSTRUMENT FOR COLLECTING MORBIFIC GERMS EXHALED WITH THE BREATH.—Mr. Francis Vacher, of Birkenhead, has devised an instrument, a wooden cut of which is given, with the description in the *Sanitary Record* of London, May 15, especially intended for measles, but which might be applied also to scarlatina and typhus fever. It consists of a hard metal cap to fit over the nose and mouth, the border touching the face being lined with an India rubber air cushion fitted with a tap. On one side is a valve opening inwards, and at the apex of the cap is a fine hole through which the exhaled breath is directed on a glass slip coated with one part of white of egg to three parts of distilled water. Before being used the instrument is plunged in warm water (about 100° Fahr.) so that the breath may not condense upon the metal. It is well to add to the water a small quantity of some simple disinfectant. As soon as the cap is warmed and dried, the glass slip charged with albumen is placed in position, and the patient is directed to breathe five or six times into the cap. Then the glass is withdrawn and dried over a spirit lamp, and the instrument is cleansed. A sample of healthy breath should be taken at the same time and the two samples may be stained with vesuvian brown and mounted in Canada balsam at any convenient time.

EDITORIAL.

THE MEETING IN CLEVELAND.—The recent meeting of the national Medical Association in Cleveland, was a successful one in all important respects. The large number in attendance, representing the profession in all parts of the country, indicated that the interest in the organization was still on the increase. The number of topics of general interest, such as a procurement of adequate provision for the Army Medical Museum and Library by Congress; the gaining of more knowledge concerning the meteorological and sanitary condition of important health resorts; the communication from a committee of the British Medical Association in relation to co-incident observations regarding the prevalence of certain diseases; the better training of nurses for the sick, etc., equally indicated that its influence both in and out of the profession was felt and appreciated. The number and character of the addresses, reports, and papers in

the several Sections, indicated decided advancement in the more scientific part of the Association work. And, certainly, the number and high character of the social entertainments, afforded ample proof that the importance of the organization was well appreciated by the citizens of Cleveland. All the business in the general sessions was transacted in good order and with a commendable degree of harmony and good feeling. Dr. Atlee presided with dignity, and all the officers, including the committee of arrangements, discharged their duties with fidelity and success. And, in the selection of that well-known author and Nestor of the profession, Dr. Austin Flint, Sr., for President, the present year, the Association performed an act alike complimentary to itself, to the recipient of its highest honor and satisfactory to the whole profession. Surely, none of these things betoken either premature weakness, or waning influence, on the part of our national medical organization. We only wish those who keep themselves at a distance, and take council of their own suspicions and fears, would come inside of the meetings and have both dispelled, by lending a helping hand in the important work of harmonizing and advancing the interests of one of the noblest professions that exist among men.

Do Moral Principles Change?—Are they subject to the Darwinian law of evolution? Has time rendered the declarations of the decalogue obsolete?

We are constrained to ask the foregoing questions by expressions we hear occasionally concerning the National Code of Ethics, by a class of physictans who are properly represented by Dr. S. Pollak, in the preamble and resolutions he offered to the recent meeting of the American Medical Association, and which can be found in the record of proceedings contained in the first number of this Journal. He says:

"The Code of Ethics has an existence coeval with the organization of the American Medical Association. It was absolutely necessary then, and it cannot be entirely dispensed with now. But in thirty-four years this country has presented so many phases in its development and progress, that new laws are being constantly enacted, and old laws are repealed or modified to suit the requirements of the time. The Code has accomplished all that it was designed it should, but at present many of its features are obsolete, and not adapted to our wants."

Reduced to syllogistic form, the position would stand thus: The Code of Ethics is thirty-four years old. During that thirty-four years, there has been such progress in the development of the population, internal improvements, and various industries of the country, that new laws are being enacted, and old ones modified. Therefore, many of the features of the Code of Ethics relating to the medical profession are obsolete. It is about as easy to see a specimen of Koch's bacillus tuberculosis through a pair of common spectacles, as to see the relation between these premises and the conclusion placed as a deduction from them. We had supposed that a code of ethics was an embodiment and application of those moral rules or principles which indicate the duties, and should regulate the conduct, of some class of intelligent beings. A code of ethics for the medical profession should embody the ethical rules or moral principles that indicate the duties of the physician to his patients, to his brother physicians, and to the community in which he lives, with such application of those principles as will afford a just guide for the regulation of his conduct in each of the three relations named.

Now, our National Code of Ethics is simply this, and nothing more. And if it was necessary and right thirty-four years ago, what are the changes that have taken place in the relations between the physician and his patient, or between the physician and his brother practitioner, or between the physician and the community in which he lives, that have rendered "many of its provisions obsolete?"

Has the mere increase in the number constituting the profession, or the extension of the boundaries of medical knowledge, or the increase of general population, altered in any degree the practical duties and relations of the physician, or the rules that should regulate them? The lapse of time may bring such extensions of social, educational, commercial and physical interests, as to require the frequent modification of old laws and the enactment of new ones, but it cannot change the principles of justice and equity between man and man, or the ethical principles that should regulate the conduct of any particular class in human society. And our friend from Missouri, from whom we quoted our text, should know that all the essential principles, and much of the language of our National Code, are taken from the work of Dr. Thomas Percival, an English physician, published in in 1803, and which has served as a guide for the English profession nearly a century. And the same will probably continue to be the guide of the great mass of intelligent medical men through the centuries to come. As in the past, so in the future, additional clauses or sections may be added for the purpose of making existing principles cover some new combination of circumstances, but neither the lapse of time, nor the progress of human society, will change the nature of a moral or ethical principle, or render its application in the regulation of human conduct *obsolete*.

Bacillus Taberculosis.—Each contribution to our knowledge of this organism by microscopists of eminence is welcome. Some time since Spina of Vienna published an account of experiments of his own to test the accuracy of those of Koch. He found that the tubercle bacilli did not, as had been asserted, take staining peculiar to themselves and different from other forms of bacteria. Koch, in his reply to his critics in turn severely criticized Prof. Spina's experiments. At a recent meeting of the Society of Physicians at Vienna, Professors Stricker and Spina reaffirm the previous observations, and describe a new series of experiments carried on by them to test the same point. They also claimed that they had produced tuberculosis in healthy animals by the injection of glass and cinnabar, the possibility of which has been denied, provided due care is taken to prevent contamination by tuberculous matter at the same time. It is not to be presumed

that gentlemen of such scientific eminenec as Professors Stricker and Spina would repeat these experiments without taking every precaution to make them trustworthy. Their conclusions, therefore, deserve careful consideration by unbiased thinkers. Professor Feltz, of Nancy, France, has also been repeating Koch's inoculation experiments with cultivated bacilli. He does not consider his experiments decisive and will repeat them, but, thus far, he has failed to produce the disease of which the bacilli were the supposed cause.

ENDOWMENTS.—We are glad and at the same time sorry to see that Dr. Eliphalet Clark, of Deering, Maine, has bequeathed some valuable land as an endowment for a new medical college. We are glad to see endowments made to medical schools. It is only surprising that the many wealthy and generous men in our country who have made endowments to schools and colleges have almost uniformaly overlooked medical institutions. The public should be most deeply interested in having medical education in this country as good as is possible; for otherwise it will suffer from the ignorance of the profession. While it is generally admitted that no literary or scientific college can be maintained properly, and its grade of scholarship kept at a proper standard without liberal endowments, still medical colleges have been allowed to shift as best they could. Is it surprising, under these circumstances, that the requirements for admission to, and graduations from, the great majority of American medical schools are so slight? We repeat we are glad to see endowments made to medical colleges; but we are sorry that they are not made to some of those already established, and that have gained reputations for good teaching. It is such schools that deserve these pecuniary rewards.

NOTICE.—The mailing of the first number was delayed by causes incident to the arranging and printing of new mailing lists. We have endeavored to supply accurately all the members who have been reported to us by the Treasurer as having paid their annual membership fees, and also all others who had sent us pledges of support. If any find themselves omitted, or their addresses incorrect, they will confer a favor by promptly notifying us. Let it also be remembered that all payments of membership dues should be made to the Treasurer, Dr. R. J. Dunglison, P. O. Box 2386, Philadelphia, Pa. And all subscriptions from non-members or other matters of business, should be sent to the office of publication, 65 Randolph street, Chicago.

EDITORIAL ASSOCIATION.—In compliance with the unanimous request of the American Association of Medical Editors, at its reeent meeting in Cleveland, we have occupied a large part of the space in the present number with the addresses before that body. They relate to topics of much importance, and we hope their reading will not be devoid of interest and profit. The next number will contain the address of the Chairman of the Section on Practical Medicine and Materia Medica, and such other papers belonging to that Section as the space will permit.

DOMESTIC CORRESPONDENCE.

PHILADELPHIA LETTER.

As predicted in our last letter, Dr. Theophilus Parvin was elected to the chair of Obstetrics and Diseases of Women and Children, at the Jefferson Medical College, recently made vacant by the resignation of Dr. Ellerslie Wallace. This accomplished physician and distinguished teacher, has been for the past two years professor of obstetrics and diseases of women in the medical department of the University of Louisville, Ky., where he attained a high reputation as a brilliant and instructive lecturer. It is very gratifying to the students, as well as to the alumni of Jefferson College, that Dr. Wallace's place has been filled in such an acceptable manner; and the faculty also congratulate themselves on such an agreeable accession to their ranks. Dr. Wallace has been elected emeritus professor.

Dr. Parvin is also well known as a medical writer, having contributed largely to American medical literature, both as an editor, and author. Philadelphia maintains her prominence as a medical center, not only by the high standing attained by the graduates of her schools, but by the wise selection of competent men to fill vacancies in her ranks of medical teachers, for which purpose the very best that the country can afford are always chosen.

On Friday, June 30, the Muller modification of the Porro operation, in turn a modification of the Cærsarian section, was performed at the Philadelphia almshouse, Dr. W. H. Parrish, of this city, the subject being a dwarf aged forty years. The woman is only fifty-one inches in height, though both parents are of ordinary stature. She has suffered with a curvature of the spine since early childhood, causing a malformation of the pelvis of such a character that delivery in the natural way was impossible. Ether was administered, an incision made through the abdominal wall, the uterus elevated from the abdomen, into which an incision was then made and a living fœtus removed. The uterus was then amputated at the cervix. This is said to be the fourth Porro operation in this country, the first successful one, as far as both mother and child is concerned, being performed by Dr. Elliot Richardson about three years ago. The woman in that case, also, was a dwarf, and survived the operation two years, recovering entirely from its effects.

We have just received word that the mother operated on at the almshouse Saturday, is dead and the child doing well. Such a result was anticipated, however, as the patient was suffering with chronic Bright's disease of the kidneys at the time of the operation. She died of uræmia, the result of an acute exacerbation of the kidney difficulty. The urine before operation showed numerous hyaloid, granular, and epithelial casts, and precipitated one-

third albumen. An autopsy revealed union along the entire peritoneal surface of the abdominal incision, no general peritonitis, and a clean peritoneal cavity. A full report of the case will be published.

But little of importance is progressing in medical circles in the city, owing to the advent of the heated term. The schools are all closed, and the streets quite deserted of pedestrians, a general exodus having been made to the various watering places, and summer resorts, to escape the rays of the pitiless sun, which beats down upon the stone pavements and brick houses with relentless energy. One of the features of the fall campaign, however, will be the opening of the post-graduate school at the Jefferson Medical College. This course has long been needed; and, judging from the wise selection of instructors, and the valuable clinical material on hand, there is reason to prognosticate a successful outlook for this new department in educational work.

We also take pleasure in chronicling the visit to our city of Medical Director Gihon of the U. S. Navy, who recently spent several days in our midst. It is also worthy of special note that two of our eminent physicians and scientists have recently received recognition of their high standing and attainments by having conferred upon them the the degree of LL.D. We refer to the distinguished chemist, Prof. Robert, E. Rogers, of the Jefferson Medical College, and Prof. H. C. Wood, of the Medical Department of the University of Pennsylvania. Dr. Rogers received his degree from Dickerson College, and Dr. Wood was honored by Lafayette.

SOCIETY PROCEEDINGS.

GHICAGO MEDICAL SOCIETY.

At the meeting of the Chicago Medical Society held June 4, 1883, Dr. R. Tilley presented a patient under his care, who is being treated for deafness, and in whom he recently discovered numerous bacteria, in the secretions removed from a decayed tooth.

The fungi were taken from the tooth in presence of the members, and exhibited under the microscope. Regarding their origin, the doctor was unable to decide positively whether their presence was the cause or effect of the dental decomposition, but inclined to the former opinion.

Dr. A. Bryan read an interesting paper on the subject of "Stammering," in which several pathological points of paramount interest were brought to notice, upon which the literature is meager. The following extracts upon this topic were taken, which may occur in persons of perfect physical integrity, and is the result of mal-habit or mal-education of the nerve centers, presiding either immediately or remotely over the organs of articulation:

The act of stammering *usually* consists in the attempt of a person to articulate an elementary sound while the vocal organs remain in the position proper for the utterance of the sound which precedes it in the same syllable.

A traumatic lesion of the mouth may temporarily disable a person in certain forms of utterance, if so, these cases are confined usually to a single letter, and often to only a single word. The worst stammerers are capable of stammering upon every letter of the alphabet and upon every word in the language, and stammer between words. At times momentary vertigo may ensue in the extreme stammerer, and tetanic action of a number of the facial muscles may occur. Stammering is more persistent in those of small intellectual caliber, and disappears more readily in persons of high or good intellectual capacity. Fear will enhance the difficulties of the stammerer, so too will cold, by decreasing the rapidity of nervous conduction. During the hot weather in summer, stammerers are often greatly improved.

Buoyancy of spirits affords relief. Consciousness of the presence of superior and arrogant persons plunges the common stammerer into difficulty, whereas the presence of a benign superior aids him. Vigorous mental excitement usually aids and relieves the stammerer. A sense of healthful joy often does away temporarily with all difficulty of utterance. Among the *causes* was antecedent disease. Children recovering from extreme adynamia in acute disease are liable to stammer afterward. And a large proportion of stammerers are made by imitating others who (mimic) a sufferer from the malady.

A large number take on their trouble by unconscious imitation. A child may imitate its brother, sister, or parent—cases that supervene in this manner are not so inveterate as those that arise through ridicule or through a malicious purpose. Children born of stammering parents usually stammer with great facility, but in these it may be of transient duration. Stammering is not analogous to aphasia due to cerebral lesion. The treatment, carried out intelligently, should usually be successful, for the tendency is to spontaneous recovery. Total non-interference should be adopted in treating all young children who have acquired the impediment by unconscious imitations. The child should be placed in circumstances of absolute freedom of general growth, physically and mentally. A warm climate enhances recovery by increasing the velocity of nervous conduction. The self-confidence of a child should be cultivated. He should be removed from all opportunity to imitate another stammerer, and should be taught music, dancing, and calisthenic exercise. The intelligent adult stammerer should be drilled in elementary articulation. His general culture should be carried to on extreme extent and a high form of will should be carried on the part of a patient.

Dr. E. G. R. Trimble, a sufferer from this lingual impediment, asked the writer if stammering was apt to be accompanied by neurasthenia; also if, in hereditary cases, the hesitation generally occurred on the vowels or consonants. Answered "No," relative to neurasthenia, and secondly, that the hesitation most often occurs on the vowel sounds.

NEUROLOGICAL ASSOCIATION.—At the meeting of the American Neurological Association, Dr. J. W. Morton, of New York, read a paper on "Neuritis following Dislocation at the Shoulder." The peculiar-

ity of this case was that the inflammatory action extended along the affected nerves of the right side involving the cord, so that symptoms manifested themselves also in the left arm and hand; but instead of causing atrophy of the tissues supplied by the nerves from the diseased center, as is usual, there was an over-excitability of the neuro-muscular tissues. The case was treated by electricity, a blister over the tract of the brachial plexus, hot and cold douches, and the use of cod-liver oil.

Dr. C. L. Dana, of New York, read a paper on "Hydro-Bromic Acid as a Substitute for the Bromides." He had used it during the last two years in cases of epilepsy, alcoholism, various forms of headache, vertigo, general nervous depression, neurasthenia, chorea insomnia, hysteria, etc. He had observed the most benefit in cases of post-hemiplegic and lighter nervous troubles. He did not find that it would prevent cinchonism. Its chief advantages over the haloids are that it is more agreeable to take, less irritating, and does not produce bromism. The doses should be larger than that usually employed. Of the officinal or ten per cent. solution, one to two drachms and a half, are the doses which he found most serviceable, and of the pure acid from ten to twenty drops.

Dr. J. J. Putnam, of Boston, described eight cases of "Lead Poisoning Simulating other Forms of Disease," such as chronic and sub-acute myelites, and one case of cerebral disease. He pointed out also certain sources of error in detecting lead in urine.

Dr. J. T. Eskridge described a "Case of General Neuralgia" and Dr. C. C. Mills a "Case of Locomotor Ataxia terminating as General Paralysis of the Insane." The patient had had syphilis, and was addicted to venereal and alcoholic excesses. After death microscopical examination showed that the spinal cord was sclerosed throughout, especially in the lumbar region. There was also diffuse inflammation of the pia mater. Sclerosis had occurred in the pons, the optic thalami and those cerebral convolutions that were examined. After reviewing the literature of the subject, the author stated his belief that in the case described the brain had not been affected by simple extension of disease from the cord, but that various portions of the cerebro-spinal system had been attacked separately.

Dr. E. C. Spitzka, of New York, made some remarks refuting the "Alleged Relations of Speech Disturbance and Patellar Tendon Reflex in Paretic Dementia."

Dr. R. T. Edes, of Boston, described some original experiments upon the "Excretion of the Phosphites and Phosphoric Acid as connected with Mental Labor." He was unable to find evidence to corroborate the strong popular opinion that the excretion of phosphoric acid was increased by mental labor.

Dr. S. G. Webber, of Boston, reported several "Cases of Locomotor Ataxia with unusual symptoms and marked remissions in their course."

Dr. R. W. Amidon, of New York, described a "Case of Tetanoid Paraplegia occurring in a Child," the tetanoid symptoms being preceded by indications of sub-acute hydrocephalus. Dr. Amidon suggested that the central trouble might, by extension to the chord, be the cause of the tetanoid manifestations. He also described two "Anomalous Cases of Parkinson's Disease." They were peculiar in showing all the symptoms of the trouble except the tremor.

Dr. V. P Gibney, of New York, showed a "Case illustrating Progressive Muscular Atrophy" and also one manifesting "Fibrillar Twitchings Follow a Gunshot Wound."

Dr. W. J. Morton, of New York, read a paper in which he described an "Apparatus for Treating Scrivener's Palsy." This consisted of a light metallic thimble for the index finger, to the end of which was attached the pen. A rubber band was placed around the thumb and finger so as to offer some resistance to extension and abduction. This apparatus kept the muscles on the stretch.

Dr. G. M. Hammond narrated a "Case of Locomotor Ataxia," in which there was apparently cure, and in which even tendon reflex had returned.

Dr. F. T. Miles, of Baltimore, read a paper on "Nutritive Alterations of the Hand from the Pressure of a Dislocated Humerus in the Axilla."

Dr. Burt G. Wilder, of Ithaca, presented photographs and a specimen of the "Brain of a Cat lacking the Callosum." During life the animal had shown no peculiarities. He also read papers "On the Alleged Homologies of the Carnivoral Fissura Cruciata with the Primatial Fissure Centralis," "On the Removal and Preservation of the Human Brain," and "On Some Points in the Anatomy of the Human Brain."

Dr. W J. Morton, of New York, read a paper entitled "Treatment of Migraine." He pointed out two types of the disease, the one spastic, the other paralytic. In the first form the bromides, especially sodium bromide was preferred. When given freely it usually aborted the attack. Nitrite of amyl and nitro-glycerine were also frequently beneficial. The paralytic form was usually most benefited by ergot and strychnia. Cauterization and electricity judiciously applied, also did good.

Dr. W. R. Birdsall, of New York, discussed the "Relation of Syphilis to Locomotor Ataxia." From the statistics which he had gathered, he was unable to agree with Erb, that the disease always followed syphilitic disease.

"Galvanization of the Brain and its Value in the Treatment of Chorea," was considered by Dr. C. L. Dana, of New York. Anodal electricity when applied to the brain, he thought acted as a sedative, retarding the circulation. In the cases of which he kept records, it seemed that under treatment by electricity, they recovered much more quickly than when using arsenic alone.

Several other papers were read by title only.

TRIPLETS.—On June 18, the Chicago Medical Society held a regular meeting, and Dr. Henry Ogden read a valuable paper on Obstetrics. This topic was made more interesting and prolific by a carefully written report on a "Trio of Cases of Triplets," all having occurred in this city recently, within the space of seven weeks. The first case cited was the birth of

three living girls, born to a German family at 96 Fullerton Ave., on the morning of February 11, 1883, during the half hour intervening between 7:30 and 8 o'clock. In ten minutes after the last child was born, a very large placenta came away. The babies weighed 6½ lbs., 5½ lbs., 4½ lbs. Mother's recovery was protracted, but at this date all are well.

The second case occurred in an American family, at 341 W. Randolph street. The triplets were boys, two of whom were born alive, on the morning of March 30, 1883, during the half hour from 5:30 to 6 o'clock. At 7 A. M., the third boy was still-born, and by appearances, had been dead for several hours. In about 20 minutes, the placenta came away. The following were their weights: 5½ lbs., 5 lbs,, 4½ lbs. The mother was very well all through her gestation, and is now quite well, and nurses the two surviving babies.

Third case, all girls, born to Swedish parents, residing at 1675 Gehrke Ave., on March 27, 1883. The first child was born at 10 A. M., and was below the normal size, the presentation being cephalic. The other two were cross-births on presentation, and turning was promptly resorted to, the last child being born with both arms extending alongside of the head. But five minutes intervals occurred between the births of the children, which were all born alive, their weights being 6 lbs. 1 oz., 6 lbs. 4 ozs, 6 lbs. 9 ozs. The urgency of the case prevented the last child from being born in other than the manner in which it was, as the arms were above the head at the superior strait, and pulsation had ceased in the cord, and a lesson from Deventer, who wrote in 1724, that everything had succeeded well in his practice by this method, "not much as one head having stuck in the mouth of the womb," was called to mind and acted upon. The mother's recovery was tedious, on account of an attack of cellulitis.

A supplementary report was stated, wherein Dr. J. W. Edwards, of Mendota, Illinois, had kindly furnished a case of triplets of three girls, born to Irish parents, on the morning of June 3, 1881, in that city. There were three separate placentæ in this case. The children are now two years old, and all well, as also the mother. Since the above paper was read, another case where three children at one birth were born to a German family residing on Emma street, all of whom are doing well, has come to our knowledge.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF TENNESSEE—FIFTIETH ANNUAL MEETING; 1883.

This volume of 104 pages does credit to the Society, for it is in good type, on excellent paper, and is well arranged, and passably well indexed. Dr. A. B. Tadlock reports an interesting case of femoral hernia; death seventy-four days after the operation. Dr. J. S. Sinclair reports two cases of plastic-surgery—one for the relief of ectropium, by transplantation from the arm; the other for the relief of symblepharon by conjunctival flaps. Dr. W. D. Hazzard reports a case of ovarian tumor of twenty-two years' duration. Dr. J. S. Nowlin discusses vaccination and small-pox, and Dr. J. W. Davis reports a case of induced delivery in a patient who was treated for abscess of the liver, and to whom in the last week of the eighth month of pregnancy he gave for this purpose quinine gr. 4, morphine gr. ½; dilated the os with very little difficulty; ruptured the membranes, and by frequent stretching of the os with the fingers, labor was brought on in less than two hours, and she was delivered of twins.

REVIEWS.

A SYSTEM OF SURGERY BY VARIOUS AUTHORS; edited by T. HOLMES and J. W. HULKE; third edition, in three volumes.

A work so large and exhaustive as this, cannot be properly reviewed in the small space at our disposal.

It is twelve years since the second edition of this work appeared, and the many additions to all the departments of surgery which have occurred since then have necessitated a thorough revision of the whole work and even the rewriting of many portions.

The present volumes are well printed, and very fully and handsomely illustrated. Each volume contains—in addition to many wood-cuts—several full-page plates.

The chapters are grouped under five divisions or parts. The first includes General Pathology, and occupies about one-third of the first volume; the second part treats of General Local Injuries, and the third of Injuries to Special Regions. These three parts fill the first volume. Part IV discusses the Diseases of the Various Organs, and occupies the whole of the second volume and two-thirds of the third. The remainder of the work treats of Operative Surgery, Minor Surgery, Plastic Surgery, Amputations, Excision of Bones and joints, and an appendix on Surgical Diseases of Childhood.

The amount of labor expended in revising the work and bringing it into its present form cannot be shown better, probably, than by giving the names and stating the work of the various revisers. W. Anderson, Assistant Surgeon to St. Thomas' Hospital, wrote the chapter on Animal Poisons, which replaces the same chapter in former editions by Mr. Poland. A. E. Barker, Assistant Surgeon to University College Hospital, replaced the essays of previous editions prepared by Mr. Athol Johnstone, Mr. Shaw, and Mr. Holmes Coote, on Diseases of the Joints, of the Spine and of the Tongue; he also edited Dr. Lockhart Clarke's essay on Diseases of the Muscular System. J. Birkett, Consulting Surgeon to Guy's Hospital, prepared the articles on Injuries of the Pelvis, Hernia, Diseases of the Breast. J. R. Bristowe, Physician to St. Thomas' Hospital, edited the articles on Diseases of the Skin, which were written by Sir W. Jenner, Dr. Hillier and Mr. Nayler. B. E. Broadhurst, Surgeon to the Royal Orthopœdic Hospital, wrote the essay treating of Congenital Dislocations and Intrà-uterine Fractures. C. E. Brown-Séquard, Professor of Medicine at the College of France, that on Injuries of the Nerves. G. Brusk, Consulting Surgeon to Seamen's Hospital, prepared the articles on Parasites and the Diseases which they Produce;

also that on Venomous Insects and Reptiles. H. T. Butlin, Assistant Surgeon to St. Bartholomew's Hospital, prepared the essay on Tumors, and re-edited those of Mr. Holmes Coote on Abscess and of Sir J. Paget on Ulcers. W. Watson Cheyne, Assistant Surgeon to King's College Hospital, wrote that portion which treats of Artificial Limbs. Mr. Callender's essay in previous editions on Pyæmia has been replaced by one written by H. H. Clutton, Assistant Surgeon to St. Thomas' Hospital. The article on Gangrene formerly prepared by Mr. Holmes Coote, for this edition was written by W. H. Cripps, Assistant Surgeon to St. Bartholomew's. J. Croft, Surgeon to St. Thomas' Hospital, re-edited Sir J. Paget's essay on Wounds, and wrote those on Hectic Fever, Treatment of Cases after Operation, and Antiseptic Method of Dressing Wounds. W. B. Dalby, Aural Surgeon to St. George's Hospital, describes Diseases and Injuries of the Ear; A. E. Durham, Surgeon to Guy's Hospital, Injuries of the Neck; and G. Harley, Apnœa. R. G. Godlee, Assistant Surgeon to University College Hospital, reëdited the essays on Surgical Affections of the Skin by Mr. T. Smith, and Diagnosis and Regional Surgery by Mr. Holmes. Dr. Barclay's essays on Delirium Tremens and Diphtheria and Croup, Mr. Durham's on Diseases of the Nose, and Mr. Holmes Coote's on Diseases of the Thyroid Body have been re-edited by J. Warrington Howard, Surgeon to St. George's Hospital. T. Holmes, the editor, writes the articles on Burns and Scalds, General Pathology of Dislocations, Diseases of the Bones, Aneurism, Excisions, and Surgical Diseases of Childhood. He re-edits Mr. Simon's essay on Inflammation; Mr. De Morgan's on Erysipelas; Mr. Savory's on Hysteria; Mr. Moore's on Wounds of Vessels, Diseases of the Absorbent System and of Arteries; and Mr. Callender's on Diseases of the Veins. J. W. Hulke, Surgeon to the Middlesex Hospital (editor) prepared the essay on Injuries of the Upper Extremity, and edited those on Tetanus, by Mr. Poland, Injuries of the Head, by Mr. Hewett, and Diseases of the Eye, by Mr. Dixon. Surgical Diseases of Women is written by J. Hutchinson, of London Hospital; Syphilis and Gonorrhœa by H. Lee, of St. George's Hospital; Anæsthetics and Amputations, by J. Lister, of King's College Hospital; Orthopœdic Surgery, Curvature of Spine, Rickets and Osteotomy, by W. J. Little; and General Shot Wounds by T. Longmore, Professor of Military Surgery at Neatley. W. H. A. Jacobson prepared the articles on Injuries of the Back and Face, and Diseases of the Male Generative Organs; also re-edited Mr. Hornidge's article on General Pathology of Fractures. Mr. Poland's essay on Injuries of the Chest, and Mr. T. Smith's on Minor Surgery, are edited by R. Lyell, of Middlesex Hospital; he is also the author of the article on Plastic Surgery. The esssay on Injuries of the Lower Extremities, by Mr. Holthause, has been replaced by one by H. Morris, Surgeon to Middlesex Hospital. Injuries of the Abdomen; Diseases of the Mouth, Pharynx and Œsophagus; and of the Intestines, are described by G. D. Pollock, Consulting Surgeon to St. George's Hospital. S. J. A. Salter writes on Diseases of the Teeth; J. Burdon Sanderson, Professor of Physiology at Oxford, Pathology of Inflammation; H. Smith, of King's College Hospital, Diseases of Rectum; Sir H. Thompson, of University College Hospital, Diseases of Urinary Organs, Lithotomy and Lithotrity, in place of those previously by Mr. Poland and Mr. Hawkins. The essay on Scrofula is by E. Treves, of London Hospital, and takes the place of one by Mr. Savory. The articles by Sir J. Paget, Surgeon to the Queen, on Pathology of Sinus, and Fistula and Contusions, and that of W. S. Savory, of Bartholomew's Hospital, on Collapse, remain unchanged in the present edition.

SITZUNGSBERICHTE DER PHYSIKALISCH-MEDICINISCHEN GESELLSCHAFT ZU WURZBURG, 1882.—This report of the session for 1882, of the Physico-Medical Society of Wurzburg, is filled with valuable material, contributed by such men as Virchow, Kölliker, Gerhardt, Rindfleisch, V. Rineker, Riezer, Angerer, Gad, Flesch, Rosenberger and others. The first article is a review by Riezer of hypnotism, followed by a description of his illustration of the subject in two girls, and several animals; and also by the ensuing discussion. He divides the subject into four heads: first, that of the old mesmerism; second, the hypnotism of Baird, with the present views of Heidenham; third, the clinical neuro-pathological views of Charcot; and fourth, the hypnotism of animals, as demonstrated by Czernak, and more fully by Pruger of Jena. His demonstrations excited considerable comment.

V. Bergmann described a case of extirpation of the larynx with the patient before him, using for the purpose of speaking a phonative apparatus, provided with a caoutchouc membrane, which imitated fairly the tones of the human voice. The other articles correspond in merit with the illustrious names with which they are associated.

NINETEENTH ANNUAL REPORT OF THE ALUMNI ASSOCIATION, ETC., OF THE PHILADELPHIA COLLEGE OF PHARMACY, 1883.—This is a very respectable sized volume of 180 pages of very fine print; no table of contents or index. It evidently contains much interesting and instructive matter, but to get at it properly one must read closely.

BOOKS AND PERIODICALS RECEIVED.

Sanitarian of June 28, 1883.

Mississippi Valley Medical Monthly, July, 1883.

Treatment of Various Forms of Acne, by G. H. Rohe, M.D. (Reprint from *Medical Chronicle*, May, 1883.)

Sanitarian of July 5.

The *Detroit Lancet*, July, 1883.

A System of Surgery by Various authors, edited by Holmes. Edition third, in three volumes. Published by Wm. Wood & Co., New York.

Quarterly Journal of Inebriety, July, 1883.

Sanitarian of July 12, 1883.

Hints on Treatment of Some Parasitic Skin Diseases, by Geo. H. Rohe, M.D. (Reprint from *Medical Record.*)

Pemphigus and Diseases Liable to be Mistaken for It, by G. H. Rohe, M. D. (From *Medical News.*)

REPORT OF THE TREASURER OF THE AMERICAN MEDICAL SOCIETY.

DR. RICHARD J. DUNGLISON, TREASURER, IN ACCOUNT WITH THE AMERICAN MEDICAL ASSOCIATION.

DR.			CR.		
1882.			1882.		
June 15	To cash balance.....	1141.38	June 15	By cash expenses of Treasurer to St. Paul meeting, as per order of Association.....	105.95
,, ,,	Delegates and members at St. Panl meeting.....	3455.00	July 3	Dr. W. B. Atkinson, Permanent Secretary, as per order of Association.....	1000.00
1883.					
June 1	Permanent members to date	1080.30	Aug. 10	Dr. Kleinschmidt, Librarian, for binding, etc., as per order of Association	200 00
			Sept. 12	Dr. N. S. Davis, Chairman, Trustees of Journal, on account.....	500.00
			Dec. 20	Houghton, Mifflin & Co., stereotypers...	400 00
			,, 31	Postage, expressage, etc., to date.....	53 81
			1883		
			Jan. 8	Wm. F. Fell & Co., printing.....	56.85
			Feb. 16	Dr. N. S. Davis, Chairman Trustees of Journal, balance	227.50
			,, ,,	Dr. N. S. Dafis, Chairman Committee on meteorology	250 00
			March 29	Henry Barnes, services as clerk.....	50.00
			April 5	*Times* Printing House Printing vol. 33....	1534.54
			,, 13	Wm. F. Fell & Co., printing.....	49 80
			May 26	F. Leypoltt, guaranmee Index Medicus.....	20.00
			,, ,,	Dr. Kleinschmidt, Librarian, expenses...	25.00
			,, 30	H. C. Levi Love & Co., postage, expressage, paper, etc.	59.65
			,, ,,	T. K. Collins, printing (1881-2).....	76.65
			,, ,,	Dr. W. B. Atkinson, Permanent secretary, expressage, postage, travel, etc.	163 00
			June 2	Balance.....	903 83
		5676.68			5676.68

MISCELLANEOUS ITEMS.

Dr. T. J. Heard, of Galveston, Texas, reports the following case: A boy of ten years of age, of strumous diathesis; cervical glands very much enlarged, lids granular, conjunctiva and cornea ulcerated. Treatment—To take three drops of compound tincture of iodine after meals, the part of the eye involved to be well sprinkled with finely levigated dry subnitrate of bismuth three times a day; eye to be thoroughly washed night and morning with lukewarm water; at bed-time the lids to be anointed with washed lard. In two weeks' time the eyes were perfectly clear and well, and the boy's general condition improved. The reason I report this case is because I have seen no mention made of the use of bismuth in such cases.

MAURICE KRISHABER, M.D., died of acute pneumonia at Paris, in 1883. Born at Felacetehazy in 1836, he took his degree in Paris in 1864. He was known both as a surgeon and laryngologist. One of Claude Bernard's most intimate students, he conducted some extremely interesting physiological researches. In connection with M. Baillarger, he prepared the article on Cretinism in the Dictionnaire Encyclopedique, which is one of the best works on the subject. His most important work, however, is his memoir on the cerebro-cardiac neurosis, generally described as Krishaber's disease, in which he describes one of the most curious forms of functional cerebral ischæmia, and which opens a vast field for pathological investigations. Shortly before his death, he received the Monthzon Prize from the Academy of Sciences for his researches into the inoculability and contagion of tuberculosis in the monkey.—*L'Encephale.*

No award was made of the Fiske fund by its trustees at the late meeting of the Rhode Island Medical Society. They offer $300 for the best essay on either of the following subjects: First—"The Origin and Progress of the Malarial Fever now prevalent in New England;" second, "Original Investigations in Household Hygiene." The essays must be forwarded to Charles W. Parsons, M.D., Secretary of Trustees, on or before May 1, 1884. Each one must bear a motto in the place of the author's name, and must be accompanied by a sealed packet containing the name and address and bearing the same motto.

Dr. H. P. Strong died at Beloit, Wisconsin, June 20, 1883. He was fifty-one years old. He had been Mayor of the city for several years; Secretary and President of the State Medical Society; during the war he was surgeon of the Eleventh Wisconsin Regiment, and at the time of his death he was a member of the State Board of Health.

The annual meeting of the Delaware State Medical Society was held at Wilmington June 12. The President-elect is Robert M. Hargardine, of Tilton; Vice President, Willard Springer; Secretary, George W. Marshall; Treasurer, J. W. Sharp.

Dr. John A. Liddell, of New York, died there July 8, 1883, aged sixty. He was well known as a writer and as Inspector-General of the Medical Staff of the Army of the Potomac during the Rebellion.

Dr. Moritz Michaelis, of New York City, died there on the 23d of June. He was well known as an obstetrician. He was born at Detmold, Germany, in 1811, and came to New York in 1840.

The New York *State Medical Register* for 1883 contains the names of 2,684 physicians living in the State, of whom 1,661 reside in New York City and 510 in Brooklyn.

DR. S. STRAUSSER has received a delegate's certificate from the Secretary of the A. M. A. to represen this body in all medical societies in Europe where

the same are in affiliation. The Doctor anticipates starting to Germany about the first of August, to be absent three or four months.

DR. R. N. ISHAM will leave the city about July 10 for a trip through Northern Europe. Considerable time will be spent in St. Petersburg, Russia. In the fall he will return to resume his lectures in Operative Surgery, in the Chicago Medical College.

MILITARY TRACT MEDICAL ASSOCIATION.— The next regular meeting of this Society will be held in Galesburg, Ill., on Tuesday, November 13, 1883.

DR. H. C. HOPPER,
Galesburg, Ill. Secretary.

The British Government has determined to send to Egypt, to investigate the cholera epidemic there the Surgeon General of the Army, who has had much experience with the disease in India.

Louis Pasteur has also offered to organize a commission for the same purpose, and has applied to Lord Granville, the British Foreign Secretary, to furnish him with facilities to prosecute the work.

Dr. Spina, of Vienna, who is best known here probably for his opposition to Koch, has been nominated Professor of General and Experimental Pathology at Prague.

The Boylston prize of $200 has been awarded to P. M. Braidwood, M.D., of Birkenhead, England. The subject was "Measles, German Measles and Allied Diseases."

Prof. Thomas H. Huxley has been elected President of the Royal Society of London.

DR. DELASKIE MILLER leaves the city in a few weeks for a trip to Europe.

NECROLOGICAL.

ROBERT SMITH, M.D., F.R.C.P., F.R.C.S., died May 15, at his residence in Strathmore Gardens, Kensington, England, in the 69th year of his age. In 1867 he was obliged by ill health, to give up public professional work, and in 1872 increasing physical weakness obliged him to retire from all active work. Born in December 1814, he descended from a family, members of which, from father to son, had practiced medicine in Wimborne, Dorset, for more than a century. He is best known as author of the "Surgeon's Vade-Mecum," the first edition of which appeared in 1839, and is now in its eleventh edition, nearly 40,000 copies having been sold; it has also been translated into foreign languages. This with his article on "Inflammation," in Cooper's Dictionary of Practical Surgery (1872), are the most important of his numerous writings. He was a very active practitioner and filled many important positions, and in a series of published articles, endeavored to combat the views on total abstinence, as opposed to temperance. The *Medical Times and Gazette* refers to him as an accomplished botanist, a good geologist and an excellent chemist, a great student of languages, and a theologian of unusual learning and force, with a thorough knowledge of the art of music. He died affected with intermittent hæmatinuria, the symptoms of which for its first six years he has himself put into print. He leaves a widow, four daughters and three sons, the youngest of whom follows his father's profession.

PETER STEWART, M.D., died in Glasgow, Scotland, May 10, 1883, in his 70th year, being born in Granock, Scotland, Nov. 16, 1813. Took the degree of M.D. at the University of Glasgow 1845. He was an active practioner in Glasgow, a Fellow of the Faculty of Physicians and Surgeons in 1858, and in 1854, 1855, 1878 and 1879, president of the Glasgow Southern Medical Society. He was for some time one of the managers of the Glasgow Royal Infirmy. He was very fond of travel and visited most of the countries of Europe, as well as various parts of America, Australia and New Zealand. He died of malignant disease of the larynx.—*Glasgow Medical Journal, June.*

W. E. SCOTT, M.D., was born in London, England, in 1823. He came to Canada in 1831. Was House Surgeon, Montreal General Hospital 1841–43; M.D. McGill College, 1844, at which college he held the following positions: Demonstrator of Anatomy, 1845; Lecturer on Forensic Medicine, 1851; Professor of Anatomy, 1856; which last position he held up to the time of his death, May 24, 1883. He was the senior member of the Faculty of McGill College, one of the oldest members of the Board of Governors of the Province of Quebec, and the oldest consulting physician on the staff of the hospital. He died of chronic renal disease and consecutive cardiac derangements.—*Canada Medical and Surgical Journal.*

HUNTER, JOHN, M.D. Died in Washington City, July 10, 1883, aged 79. He was a native of Virginia, and a graduate of the University of Pennsylvania in the class of 1826. Although a man of fine literary and professional acquirements, he passed most of his life as a clerk in public office.

LIVINGSTON, BEVERLY, M.D. Died of diphtheria at his residence in the city of New York, July 2, 1883, aged 31. He was a graduate of the College of Physicians and Surgeons, and was making the diseases of children a specialty.

BAKER, PAUL DELACY, M.D. Died at his residence in Eufaula, Ala., July 6, 1883, aged 55. He had practiced in the same place for over a quarter of a century, and was greatly beloved by the whole country.

SCOTT, THOMAS A., M.D. Died July 11, 1883, at Petersburg, Va., aged 80. He was one of the most eminent practitioners in Virginia, and a nephew of Gen. Winfield Scott.

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ORIGINAL ARTICLES.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON PRACTICE OF MEDICINE, MATERIA MEDICA AND PHYSIOLOGY.

BY J. H. HOLLISTER, A.M., M.D., CHICAGO, ILL.

Delivered to the American Medical Association, June 6, 1883.

GENTLEMEN OF THE ASSOCIATION—

In the development of medical science, men have been compelled to grapple with some of the most intricate and difficult problems which can challenge investigation.

In studying those higher relations which lie in part beyond the limits of finite conception, reason may properly defer to faith, and, seeking the guiding hand of revelation, walk with a wisdom other than its own. But in medicine it is not so. Forces, mental and material, interchangeable, inter-dependent, and inseperable, manifest themselves in ways so manifold, and with so many essential facts undiscovered, that reason is compelled to thread her way with steps slow and uncertain, sometimes, in truth, oft times in error, ever painfully conscious of her weakness, and of the mysteries that confront her on every side. Thus only may we account for the seemingly meagre fruitage which represents the labors, for more than two thousand years, of some of the ablest minds the world has ever seen.

Those great problems of health, and of disease, of life and of death, which affect the well-being of the race, have been matters of patient investigation by many of the foremost men in every generation. And many of them have wrought out work which will endure as long as literature shall survive. But the essential causes of diseases have, in the main, been so obscure, and their expressions so varied and complex, that the best of men have been compelled to conclusions largely inferential. Accordingly, in tracing the progress of medicine through the centuries, we encounter on the one hand, flights of imagination and fanciful speculations which challenge comparison and provoke our mirth; and on the other, ingenious reasonings and logical conclusions which surprise us by their truthfulness.

In the absence of positive knowledge, no man can lay a restraining hand upon the fancies and credulities of men, and medicine has ever been the fruitful field, above all others, for their exuberant development. Speculations have been piled mountain high by one generation of workers, to disappear before another as chaff before a driving wind. But despite the winnowings, there still remained some golden grains of truth, and the treasure-house has been slowly but surely enriched by these garnerings of the ages. The mile-stones that mark the years of special achievement are set with sparing hands, and the records of successive years so merge and blend with their associates, that each seems but a link in an unfolding endless chain. How then shall I presume to stand in the presence of these representative men, and fulfil the duties of this hour by reciting to you the progress of investigations in physiology, in materia medica, and in medicine during the brief period of a single year? And yet I may not wholly shun the task as though it were an idle one, for I am well persuaded of this year that its labors will not be barren of good results.

Let me first present some topics in this brief review, which pertain to medicine in general, and quickly come to others, more legitimate matters for this paper.

First. I think we may congratulate ourselves that the year has been so prolific of trustworthy, accurate, and able workers. Probably no year in the world's history has witnessed an equal amount of legitimate original investigation. Fewer men are willing to shine with borrowed light. No man can longer assume a solar altitude, to illuminate a hemisphere. The present army of workers seems rather a galaxy of stars, differing, of course, in magnitude, but each according to his measure, a light unto himself, ready and generous to accept what can be verified, and as quick to criticise and, if need be, reject where the data are insufficient. The labors of such men are destined to achieve results which could never be accomplished otherwise, and there is born of such united work a sympathy and an enthusiasm which is becoming world-wide and grand. Neither England, Germany, France, nor Switzerland are indifferent when Bizzozero speaks from Italy, nor is the old world regardless of the new.

Second. The medical journalism of the year claims favorable comparison with any that has gone before. An abler literature is given to the press. A wiser supervision is clearly manifest. New and able contributors are coming to the front. All departments of medical investigation are having an abler expression of their work. Some curious deformities are growing more and more conspicuous—journals with representative names, with bodies very small and well-nigh meatless, are floated aloft on wings of magnificent proportions, upon whose almost countless folds advertising manufacturers display the merits

of their wares, and, assuming the direction, propose to dictate to the profession how medical journals shall be run. There will be a movement in that matter some day, and, when there is, that hitherto unbridled license will be abated.

Third. The masses of the profession are steadily ascending to higher positions of attainment. They read more; they think better; they practice their profession with more intelligence and with better success. At no time before were there as many talented and industrious physicians working in all the domain of medicine and surgery as there are to-day. Feats are now accomplished by hundreds of operators which would have immortalized either of them, not a hundred years ago. And pathological investigations and physical diagnosis have reached a point never before attained.

More than in any year before, the centers of intensest study, have been within the range of microscopic vision.

In the Dictionnaire Annuel for 1882, Garnier's opening words are these: "*Des Microbes ! tojours et partout, des Microbes !! Rien que des Microbes !!!*" And what has been true in France has been equally true elsewhere.

The discoveries in science are not always comforting, and I doubt whether it really conduces to our happiness to discover what animated bodies we possess.

But—receive it as we will—the microscope commands the advance to-day, and assertions based upon its revelations, be they true or false, can only be tested, accepted, or rejected upon authorities equally skilled in microscopy. In this new field to which so many eyes now turn, and in which work so important is being done, no man can longer speak as an authority who can not, with equal skill, review the work of other men. A great educational work is going on. Men yet differ vastly in the interpretation of what they see—as we shall have occasion yet to notice—new fields are opening every day, and new facts are added to our knowledge.

The limit of measurement has now attained to the one hundred and forty-six thousandth part of an inch ! Beyond this lies the *molecule*, and beyond the *atom !* It is idle to speculate as to where the limits of human vision shall finally fall; but, from the diligent study of what lies within the present range there surely can come no harm—there is certainly a promise of great good.

In microscopy two subjects more than any others command attention at this hour. The one is the composition of the blood ! the other, the agency of microcytis in the production of diseases.

There has been of late a bit of sharp practice with glasses trained upon the red corpuscle; some asserting most stoutly that a close reticulate network pervades every part of the cell, and can be seen most distinctly by those who know how to see. To which others reply, We can see what you see, when our glasses are mal-adjusted ! Correct your optics and your network will disappear.

In this contest between "I do," and "You don't," I think the latter has rather the best of it.

There is another question under discussion which deeply interests medical men. The occasion was this. On the 14th of January, 1882, Prof. Bizzozero, of Turin, announced in one of the prominent medical journals his discovery of what he was pleased to call the "*Blut Plattchen,*" and which was brought prominently to the attention of English and American readers by a leader which appeared in the London *Lancet*, under date of Jan. 21, 1882, entitled "The New Blood Corpuscle."

It was claimed as a new discovery, distinct from the invisible corpuscle of Norris—not derived from other leucocytes,—playing an important part in the functional alterations of the blood,—that they rapidly increased in certain morbid conditions, notably after bleeding, and have an active agency in the production of thrombi.

The chief point of interest is the *role* they are asserted to play in the development of fibrine, for if this view is accepted, the late theories of fibrine formation by the agency of a ferment, or of chemical affinities, are set aside, and that of morphological changes induced by the degeneration of these cells must be accepted instead as the essential fact in fibrine production.

This article commanded very general interest, and attention was immediately turned to the valuable labors in this same field by Prof. Norris, of Birmingham, England. His labors upon blood, its physiology and pathology, had by no means commanded the attention which their worth deserved; but now his results, published at various times during the last five years, are being reviewed with great interest, and it seems to me, as the case now stands, that England and not Italy will maintain priority in the discovery of the third corpuscle.

Time will only permit a very brief reference, while considering the microscopic changes of the blood, to the series of very interesting studies of the blood of John Griscom, a man of fine physical development and then in perfect health, who voluntarily entered upon a prolonged fast, which was commenced on the 28th of May, 1882, and continued for 45 days, these studies being made by Prof. Lester Curtis, of Chicago.

The observations are of special interest as showing the effects of the absolute withdrawal of nutrition for so long a period upon the number, sizes, shapes and structural changes of the various corpuscles discernible in human blood. Some of his descriptions are evidently of the same structures which are just now described by Dr. Norris, in his masterly work upon the blood, which is just fresh from the press, and one of the most valuable contributions to medical science, I think, ever made upon that subject. Further investigations will determine what now are matters of question, and the morphology of the blood is as important as its study is interesting. It is a field demanding hard work, but it promises large returns.

If we turn now to the subject of micro-parasitic organisms, perhaps the most prominent man that confronts us is Dr. Robert Koch. But a few years ago he was an obscure physician in one of the country

towns in Prussia. To-day he is at the head of the Imperial German Health Bureau in Berlin. Probably his name has been spoken and written more often by his professional brethren than that of any other member of the medical profession. This prominence is based upon his discovery of what is becoming familiar to us as the *Bacillus Tuberculosis*. And whether the discovery shall prove fruitful or barren of result, no one can deny but that it was the legitimate offspring of long continued, painstaking and admirable work. By devising new methods of staining, he was at length enabled to find in all tubercular tissue a characteristic *bacillus*. It differed essentially from all other bacteria except those of Lepra, and from these he distinguished it as being somewhat narrower and more pointed at the ends, and by being differently affected by staining. He found these bacilli in all localities where tubercular processes were active. In size they were from one-fourth to one-half as long as the diameter of the red corpuscle. They were sometimes free, sometimes in heaps, and sometimes within the cells—especially were they found within the giant cells of tubercular growths. Not only did he find them in tubercular nodules of the lungs, but in tubercular infiltrations of the spleen, liver, kidney, and pia-mater as well.

As this subject will be more fully considered in one of the sections during the present session, it is not needful that I should give his investigations farther attention now.

One very important question arises in this connection, in fact a pivotal one, upon which all others must turn. The presence of specific organisms in many forms of disease even the most skeptical must concede; but the main question is this, are they causative, or only concomitants?

It certainly will not be conclusive to simply assert the presence of characteristic bacilli in the parts diseased, for in such the soil may be nourishing to the one and sterilized for others, affording as many pretty examples of the survival of the fittest.

Accordingly, Koch and many others are now giving their attention largely to the matter of germ culture and the reproductions of specific diseases by successive generations of characteristic bacilli.

Koch narrates at least one hundred experiments upon guinea pigs, rabbits, and cats, using sterilized ox-blood-serum most successfully as a culture fluid in the germination of bacilli, and he says, that "when a small quantity of this infective fluid was injected into the anterior ocular chamber of guinea pigs, and also into cats and dogs, which do not ordinarily become tubercular, general tuberculosis made its appearance in about ten days, and ran a rapid and fatal course."

Perhaps anthrax stands at the head of the list of diseases that can be propagated by inoculation with specific bacteria. This assertion has been confirmed by so many experimenters, as to leave no reasonable doubt, but that this disease is dependent upon the presence of specific organisms, and that after successive generations, by careful culture, have been isolated from other contagium, the introduction of these micro-germs will develop this specific disease.

Erysipelas is coming to be classed in the list of parasitic diseases. Fehleisen asserts that he has carried the culture of the specific bacillus to the 9th generation, and by the inoculation of rabbits and of one human subject, with the infective fluid, he has developed typical forms of erysipelas.

In leprosy the discovery of a distinctive bacillus is asserted by some, and denied by others.

The same with reference to gonorrhoea and the micrococci of the vaccine pustule, and those of typhoid fever.

In most cases the bacillus has not been so absolutely separated from other possible causes, as to permit the assertion that it is *solely* responsible for specific results. At this point we rest the review of present microscopic work.

The subject is of utmost interest, and each year's development in this direction, will command the careful attention of every well educated physician.

Of course, if we accept the germ-theory of diseases, our thoughts turn at once to their germicidal treatment, and investigators will soon be following in the footsteps of Sternberg, with experiments, to determine the germicidal value of therapeutic agents.

The question that concerns us most, is not as to whether we can destroy bacteria, but whether they have not a greater vitality than the tissues of the human body, and whether, in a germicidal warfare, the human organism will not first succumb.

In this respect our successes may be similar to those in the celebrated surgical case, in which the tumor was saved but the patient was lost.

In materia medica the new remedies proffered to the profession are almost without number, but none seem to me so prominent as to command special attention in the year's report.

I am happy to announce to you, that a law has just come into force in Italy, which prohibits the sale of patent medicines throughout the kingdom, unless the precise composition of the medicines is stated. This important decree has been promulgated by the Minister of the Interior, the Customs, and the sanitary authorities, with instructions for its rigid enforcement.

How long shall enlightened America fall so far behind Italy, in the enactment and enforcement of similar laws?

With a view to the advancement of medical science in America, to the end that its people may command a better service, and that in the advances in the years to come the profession in our country may be more creditably represented, I shall crave your indulgence while I close this paper with the following questions and suggestions:

Is the time not nearly at hand when the medical men of the United States, governed by motives which rise above and control all selfish considerations, shall be prepared to institute something like the following action:

Let the medical profession in each State, in such manner as seems most satisfactory, designate one of its number, to constitute, with a like-appointed member from each of the other States, a Nominating Board.

Let it be the duty of this board to nominate a list of men suitable for appointment by the President of the United States as members of a Medical Bureau, to be constituted with specific powers and duties. In this bureau, composed, say, of ten members, let the army, the navy, and the marine service have a proper representation.

Let the members of the bureau be subject to removal only for causes, one of which shall be the attainment of a specified age; and receive a salary, each, of not less than $10,000 annually, to be paid by those who are applicants for the degree of Doctor of Medicine.

Let the laws of the various States be so modified that the power to confer medical degrees shall vest solely in this body. Let sessions for examinations be held in all the States at such times and places as wisdom may dictate, to the end that all medical students shall have ample facilities for attendance.

Let the standard of requirement be reasonable, but, at the same time, such as shall inspire ambition in the student, and respect at home and abroad.

Let students graduated by the National Medical Bureau receive an honorable distinctive title, say that of National Fellow of Medicine.

In due time let all governmental appointments, as in the army, the navy, and in the marine service, be made from this list. In all contract service and marine and railway service, let such graduates have preference, and in all civic positions let them receive encouragement. Let the State boards of health be empowered, after a specified time, to require that those only who are thus graduated may legally practice medicine in the several States.

The highest interests of our commonwealth are inseparably related with the highest attainment possible in the successful treatment of diseases. Let it be clearly apparent to the legislatures of the several States and to the national government, that the general good could best be served by such procedure, and the necessary laws would be speedily enacted.

To such a movement the colleges could offer none other than a selfish objection, and how long would the will of a few hundreds of professors stand in the way of the expressed convictions of the tens of thousands of physicians.

Let the physicians encourage only those to enter upon the study of medicine whose ability and previous education give reasonable assurance of an honorable graduation. Let them advise the attendance of these students only at such medical colleges as have made this provision for final graduation, and all reputable colleges would soon fall into line.

I see no manner in which a common standard of requirement can be instituted in this vast republic but in some such way. I think I see in such a plan, wisely and impartially executed, the possibilities of a medical culture of the masses of the profession such as the world has not yet seen.

Is it not time that the profession began emphatically to assert its own self respect by calling a halt, and requiring that the indiscriminate grinding of the diploma mills shall cease.

With the medical profession of America such an advance is possible, and with them is vested the power to correct abuses which are only too apparent.

THE TREATMENT OF YELLOW FEVER.

BY ROBERT D. MURRAY.
SURGEON U. S. MARINE HOSPITAL SERVICE.

[Read to the Section on Practice of Medicine, etc.]

In presenting this paper, I do not propose to announce any new or certain method for treating a case of yellow fever, or to collate an array of cases that would prove a definite plan to be invariably successful, but I will make some practical remarks on the management of yellow fever, most of which are the gleanings of actual experience in the yellow fever epidemics of 1873, 1875, 1878, and 1882.

I wish to protest in advance against nihility and theoretical therapeutics, which find favor with some. There is such a process, or art, as treatment of yellow fever, and there is also much manœuvering called treatment, the perpetrators of which should be sent to Labrador or a colder region on the first news of an outbreak; and theorizing in general is of best service in a similar climate. It has been my fortune to witness much bungling and to see experimentation signally fail.

The common sense, nature-aiding methods of years, have been and are successful enough for practical purposes. In battle, soldiers are slightly, severely, or mortally wounded; the latter class die, the former get well, but the others must trust to luck, doctors, and grit—but some of them die from stupid bungling, or accident, or loss of pluck at last, the results being charged to the enemy.

So it is with yellow fever patients: Some are fatally poisoned at the beginning, a majority will ordinarily get well in spite of bad medication, while many die from experiments, nihility, fright or accident. It is impossible in the onset of an attack to prognosticate the result, as some cases, apparently congestive, will at once respond to palliative measures, and others who apparently promise an ephemeral case, deceptively glide into continued fever or fail in the stomach or kidneys and go on to a fatal result, too often because the preliminary mildness of the attack threw doctor and patient off their guard. Thus treatment and observation are necessary in all cases. That treatment shall be effectual even to the last possible chance, and in no case cause serious consequence in itself, is important.

I do not in this brief paper undertake to give any pathology of yellow fever which shall furnish a clue to rational treatment, but I assume that the condition I see when first visiting a case is a result of aforetime processes, and that I cannot entirely arrest a process already nearly completed, even if I knew what the process was. Experiments to arrest it will only be loss of time. So I strive to correct the mal-condition and forestall the incidents that are presumably fatal. It is certain that a routine treatment for the most part is preferable to vain seeking after idiosyncracies or peculiar circumstances, but the advisa-

bility of treating the individual patient and not the disease is a truism not to be forgotten.

The importance of early medication cannot be over-estimated, and it must be conceded that treatment to be early in a time of hurry and panic should be simple, effectual and well known. To wait a couple of hours for a physician to come, to send to a crowded or short-handed drug store for medicine, to even deliberate on the necessity for medication, are often delays of sufficient time to preclude a favorable result. The first thing to do in the presence of an epidemic is, therefore, to inform the public what to give in all cases of suspicious nature, or actual attack of the disease. Mustard, castor oil, compound cathartic pills, cinchona salts, spirits, and lemons, should be provided by every householder or placed within easy reach of every possible case. Physicians should carry a sufficient supply of remedies for the conditions or complications that may need immediate attention. Writing prescriptions consumes a double portion of valuable time, confuses judgment, increases expense, and at times impels a physician to postpone a modification, or change, when half confident it should be made, for fear of alarming the patient or his friends by another parade of paper, pencil and directions.

WHAT TO DO FOR THE FEVER.

A person has frontal headache, pain in back and thighs, flushed face, malaise, and temperature of 38 C. or more. Give 1 to 4 compound cathartic pills or 8 c.c. to 60 c.c. castor oil according to age, at once. Give hot mustard foot bath, by placing a foot tub on the bed and under the clothes, bathing feet and legs till water is cooled, taking care to keep the body covered. If the thigh pain is not relieved somewhat, add more hot water. When practicable it is better to give a full length hot bath, and to lash the patient in blankets if there is agonizing headache or backache. After two or three hours of profuse sweating rub off with dry towels, change the bed clothing, place a wet cloth on the forehead and await action of the cathartic. If there is no response from it in 4 or 5 hours, give a saline cathartic or an enema. It is permissible to allow the patient to sit on a close stool or vessel during the first or first two actions.

Give hot lemonade, orange-leaf, lemon-grass, or weak Japan tea for first 24 hours. Cold drinks are allowable, but are to be limited as to quantity. Spt. eth. nit. and spt. mindereri, or solution of potass. chlorat, may be given at regular intervals; not so much for the physiological effect of the drugs, as for the mental peace of the patient, for, as will be mentioned farther on, every possible means must be taken to insure mental tranquility. Insist on quiet and recumbency for at least five days. After 24 hours allow corn starch or hominy gruel, and gradually add milk and broths as occasion demands. This is all that is required in most cases, and additions are inadvisable. If all is well on the 4th day give a tonic of cinchona salt to hasten recovery of strength.

If malaria is mingled with the fever-cause, always give a drachm of cinchona salt within the first twenty-four hours, to all cases. This will modify or forestall delirium and obviate in a measure the danger of a subsequent rise of fever. In such a case cinchona must always be given on the 6th or 7th day to prevent a chill, which may be congestive and more than usually dangerous. I beg to say that cinchona does not cure yellow fever, but the apt use of it will brace up the nervous system in advance of depressing conditions, and in this manner it not only wards off complications, but hastens recovery. The shortening of convalescence is of prime moment, especially if the patient is a physician, commander of a post, or member of a relief committee. During convalescence the tr. ferri chlor, hydrochloric or nitric acids may be administered with the same good effects that characterize their action in other debilitating diseases. But in some cases troubles arise and our hopes of a quiet time are shattered, and we are forced to meet incidents that will tax our patience and skill.

Restlessness is best controlled by potass. bromide and chloral. The medicine should be given by the mouth, as long as the stomach will retain it. They are effectual when administered by enema, but cannot be repeated very often, without injury. Sometimes a simple clyster of soap-suds will check it. Bathing the face and neck with cologne or perfumed water, or the whole body with dilute spirits or dilute vinegar are advisable.

If the temperature persists at 39.° 5 c. or more at close of 48 hours, give a clyster, and bathe the body with a lotion of cinchona salt, acid hydrochlor. with brandy and water every 2 to 4 hours, or perfumed vinegar or aqua sedative. If there is no nausea, continue the warm drinks and give cinchona guardedly. Nausea is an alarming sign and its approach is usually detected by tenderness of stomach. Never ask a patient if he observes it? The hint may produce the difficulty we fear. Give lime water colored with milk or just diluted; allow small pieces of ice to be taken and eaten; put sinapism or spice-pepper-plaster on epigastrium; give charcoal moistened with port or favorite wine, if renewed action of bowels is needed, give a clyster.

Vomiting must be prevented for physical as well as moral reasons. On its occurrence give charcoal, ice, lime-water, etc. Charcoal is a valuable corrector of nausea, and if it fails to prevent vomiting the dread of black vomit is allayed more or less by the fancy that the color is given by the remedy. A blister is advisable in some cases, particularly if the odor of the mustard is objected to, or if there is no sign of blood in the vomit after 36 to 48 hours. Applying a cold towel to the neck or passing a piece of ice over face and throat is oft-times effectual. By all possible means prevent vomiting; the loss of blood is of less moment than the alarm and exhaustion produced by the act. If the stomach is filled with the black vomit the best hope is that the fluid will be carried off by the intestines. Long continued vomiting after danger of black vomit is past is best checked by small doses of calomel, hypodermic injection of morphia, cold to the head, and absolute deprivation of food and drink by the mouth. Hiccough is frequently a troublesome complication. Calomel to induce purgation, a clyster of warm water followed by a dose of pot. bromide and charcoal, a tablespoonful of lemon juice,

or a few drops of chloroform are to be tried in turn.

Restlessness, if not relieved by pot. brom. and chloral, and by cessation of all irritating surroundings, may be modified by a continued rubbing of limbs and back with smooth towels or the bare hands. Patients who at the onset have been put under the influence of the cinchona salts will not be as restless as those who have not been so treated.

Constipation is out of the question in a fairly begun case. Diarrhœa and colic sometimes give annoyance. If no contra-indication exists, ordinary means may be used to control them.

The urine should be examined at the end of 60 or 72 hours. If it is albuminous, give 2 to 4 c.c. turpentine in sweet oil, and repeat in three or four hours. Smaller doses may do, but 4 c.c. will do no harm even to children. If the breathing is labored give spirits guardedly and large doses of digitalis. In case the turpentine cannot be retained, it may be rubbed in, and a poultice of digitalis and hops applied to the hypogastrium. Follow the same plan as to suppression of urine, and see to it that the extremities are kept warm by flannel wrappings or other artificial means. Do not mistake retention for suppression. After the stage of albuminuria or suppression, tr. ferri. chlor. is always indicated. I believe that the giving of it in advance tends to prevent the complications, but I doubt the efficiency of all other diuretics.

COLLAPSE.—Put sinapisms or pepper poultices as nearly all over the body as possible. Rub the spine with a sponge dipped in alcohol and capsicum. Give spirits if borne, or by enema. Warm the extremities by hot bottles or bricks. Give rational doses of digitalis.

FOOD.—Give practically nothing for three days, the only admissible articles plain salted hominy gruel, alkaline milk, corn starch gruel, Mexican stole and sweet beef essences; condensed milk should be diluted with lime water. Until patient is safe beyond doubt give these with no additions beyond milk or wet toast, soft eggs and soup. Brandy or whiskey are of advantage in some cases, but wines are by all means preferable. Champagne is best of all if a fresh bottle can be opened every time it is given. Port and Catawba wines cover the widest range, but if more acid ones are liked, they are admissible. Keep up observation as to food of a Caucasian patient for at least a week. Many a convalscent has been murdered by undue feeding, while it is hard to conceive of one dying from simple exhaustion.

OBSERVATIONS.—Keep the patient covered with one sheet and a blanket to continue skin moisture. Do not change clothing unless absolutely necessary. Flannel shirts are advisable despite the eczema they may cause. Let the chamber be light and ventilated, avoiding draughts. Insist on persistent recumbency for at least five or six days, and upon the use of bedpans and urinals. The least muscular effort will sometimes turn the scale when the patient might have recovered.

Avoid heart depressants in all forms; there will be no inflammatory complications to guard against, and the heart will soon get weak enough when deprived of all nutrition from healthy blood, and when it is pumping a sticky, almost tarry fluid, for days at a time. Collapse frequently results from the little extra effort of heart, caused by a bit of startling news, or slight exertion. Avoid opium as long as there is risk of albuminuria. It might be eliminated from the yellow fever supplies with benefit to patients.

The rare neuralgia of the liver as a sequel is most effectually relieved by belladonna. Convalescence is hastened and always assured by cinchona and the mineral acids.

Hypodermic medication is useless during the febrile stages, and is always liable to produce abcesses which are difficult to heal.

As the mind of a yellow fever patient is always clear during the period of greatest danger, the manners of the physician have much to do with the recovery and are of great moment, although they would seem to have no relation to treatment. It is necessary to finesse, and deceive almost every patient as to his real condition and prospects, but owing to the acuteness of the reasoning faculties it is not well to be caught in the deceptions. Do not ask unnecessary questions; make judgment without parade, or prolixity, and so as to not arouse suspicions of danger. Do not ask about the stomach in a direct manner, an apparently careless pressure on the epigastrium will tell you more than the patient needs to know. Use a thermometer not oftener than three times a day, and at the same time do not expect to judge of degree of fever by pulse, or skin, or tongue.

In case of physician or experienced person, always report the fever as one or two degrees lower than it really is, and be sure that no thermometer is at hand for the patient's use. A centigrade thermometer is sometimes advantageous if the patient does not know the rule for conversion.

Visiting by acquaintances should be interdicted and only serviceable friends allowed access.

Deaf and dumb nurses would be ideally perfect. Everything, noises, smells, habits, etc., which can disturb the patient, and rumors, gossips, news, or conversation which might excite thought or worry must be prohibited, and in all ways the patient must be led to consider his condition as favorable. Reports of death and sickness and remarks about absent relatives are cruel. If the patient's will is not made, the mention of the fact will insure the need of one. Paradoxical as it may seem, a crowded hospital ward is the best place in which to treat a large majority. The physicians and nurses go about in a methodical, don't care, matter-of-fact way; all emergencies, bad signs are observed soon, necessary attention is given, no news of panic or death comes in. Sickness is the business of all, other patients are worse off, some who appeared to be worse off are convalescing, and patients get well who under a mother's sympathetic hands would die.

In men particularly, (for priapism and inordinate desire are not infrequently accompaniments of convalescence) coition should be prohibited until safety is absolutely assured, and the only way to secure abstinence is to warn the female as well as the patient in plain terms. Not a few cases of fatal collapse are attributable to the exercise of the marital privilege

before the tenth day of convalescence; and I know of such even after the man had been instructed as to the prostrating effect. Some of these observations may appear frivolous, but the saving of most of the doubtful cases depends so much on observance of all the details of diet and strength-saving, that I have run the risk of being prolix in order to state them. If only a few lives can be saved, the death-rate is made to comport with the possible, and it matters little whether they are saved by drugs administered, or through the common sense instructions of physician and attendants.

Notes:

I am almost certain that I saved the life of an esteemed physician by deceiving him as to his temperature. In disgust that so strong a man could not get up a fever higher than 39 C. or 39.5 C., (when it was, in fact, at one time 41 C.), he concluded that he was not so very sick after all. His three weeks' convalescence with yellowness of eyes and skin and extreme prostration fully evidenced the danger he had been in.

A priest, sick in an upper room, heard some ladies speak of the death (which occurred a moment before) of the commander of the fort, and of the necessity of keeping him ignorant of the fact until his crisis had passed. By a strong assertion of his will he decided not to be alarmed if the news should come to him, and not to ask the usual question about his now dead friend. He recovered; but if he had been startled by the sad news he would have vomited, collapsed and died.

A young man, with physically favorable prospects, conceived that a fellow-boarder was in love with his perhaps fatally ill wife. His inability to protect her by personal attention caused such distress of mind as to continue his fever until the sixth day in spite of all care and effort, and death resulted. His wife was only saved by concealing the fact of her husband's death for twelve days.

I have little fault to find with other plans of management as to medicine, but only give what I have reason to be satisfied with.

Salicylate of soda, carbolate of soda, *et al.*, are useless. Pilocarpin has failed to meet my expectations. Large doses of calomel as a purge causes loss of three to six hours valuable time. The "three times three" treatment is useless in early vomiting cases—*i. e.*, 3 grs. each of quinine, calomel and Dover's powder every three hours. As a febrifuge and diaphoretic it is of service. I have seen patients die with "liver pads" on them, and have removed them to put on a sinapism.

"Liver medicines" are of service in preventing the antecedent constipation, and thus tend to lighten attacks, but they do not prevent.

The "fever cot" is dangerous, expensive, requires two or three attendants on every patient, and is not infallible, as I saw the inventor die on one under his own directions.

The Secretary of the Section has furnished the following brief notes of the discussion which followed the reading of the foregoing paper—[EDITOR]:

Prof. H. F. Campbell, of Georgia, stated that he was impressed by the comprehensiveness of detail exhibited by Dr. Murray in his treatment of the subject. But basing his remarks upon his own experiences of the disease, said he recommended phlebotomy and the administration of emetics and cathartics, in certain cases, and laid particular stress upon the administration of quinine and liquid food.

Prof. Palmer, of Michigan, joined in the discussion; and Dr. Elliott, of Pennsylvania, objected strenuously to venesection, but advocated diaphoresis, and advised moderation in the use of therapeutic agents.

Dr. A. N. Bell, of New York, advocated diaphoresis, the use of sulphur and magnesia to produce catharsis, and absolute physical and mental quietude during convalesence.

Dr. Franklin, of Ohio, favored depletion by the use of calomel, and a strict diet during convalesence.

Gen. Elwell, of Ohio, was invited to a seat in the Section, and favored the audience with his experiences of yellow fever, at Port Royal, in 1862.

Dr. J. B. Hamilton, Surgeon-General of U. S. Marine Hospital service, closed the discussion on Dr. Murray's paper, stating that he believed in the contagiousness of yellow fever, in the value and advisability of quarantine, and urged quarantining, disinfection and cleansing as means of prophylaxis against the fever.

MILK SICKNESS.

BY WILLIAM MORROW BEACH, M.D., LONDON, OHIO.

[A Paper read before the Section on Medicine, of the American Medical Association, at Cleveland, Ohio. at the Session of June 5th, 6th, 7th, and 8th, 1883.]

I believe milk sickness to be a disease *sui generis*. In Madison county, Ohio, where I was born and raised, I presume nearly one-fourth of the pioneers and early settlers died of this disease; nor is its cause entirely eradicated there, or in many other districts of country where it has ever been known to prevail. Its principal fields have been Western Pennsylvania, Ohio, Kentucky, Tennesseee, Illinois, Indiana, and Michigan; and it has probably never been known in New England, west of the great American Desert, nor in any of the countries of the Old World. Its existence as a *specific* diseases has generally been discredited by the writers of medical literature in the eastern cities; and I think it is nowhere mentioned in any text book on theory and practice I have ever read.

The disease in the lower animals is called "trembles;" and "milk sickness," when it affects the human species. The disease is most common in the late summer and early autumn; but it occasionally occurs in the winter season.

Among domestic animals the trembles usually first affects unweaned calves, or lambs or colts. This would be expected, as the poison seeks elimination, or is eliminated in part, through the emunctory of the lacteal secretion; and the unweaned are subjected to the double cause—the cause that affects the mother, added to the poisoned milk it nurses.

It next affects the other animals of the herd that are not giving milk; and the milk-giving animals last of all. This holds true with cattle, goats, sheep and horses.

The poison, whatever it is, is *specific*. The milk, the butter, the flesh of an animal suffering with trembles or in the prodromic stage of trembles, or bordering on the prodromic stage, transmit, or are liable to transmit, the disease to other animals that partake of them.

Wild animals are no less and no more exempt than domestic animals. The wolf, the fox, the wild cat, the wild hog and the turkey-buzzard that partook of the dead body of a deer that had died of the trembles, in the pioneer days of the infected districts, were as liable to contract the disease as the dog, the cat, the hog, the turkey-buzzard, or the fox that eat of the dead body of the calf or other domestic animal of a later day.

ETIOLOGY.

1st. Many of the pioneers, as well as many well-informed laymen and physicians of the present time, attribute the cause to the ingestion of some vegetable by herbivorous animals. These advocates are, and have been about equally divided between the *eupatorium ageratoides* and the *rhus toxicodendron* as the vegetable that contains the specific poison.

2d. Others have claimed, and still claim, that it is contracted by the herbivora drinking from certain sources of water supply contaminated with the specific poison.

3d. Others have claimed that its origin is malarial —marsh misamatic.

4th. That it is of a gaseous or mineral origin, and may be breathed, drank with the water, or ingested as it settles on and adheres to vegetation.

5th. That it is produced by spores, bacteria, or some microscopical fungi or disease germ.

In the consideration of its etiology a few well established facts should be borne in mind.

1st. The trembles are seldom met with in a wet season.

2d. In exceptionally dry seasons it may be confidently expected—in localities where the cause is known to exist—if domestic animals are not cared for by the thoughtful owner.

3d. In fields where the flora may be supposed to be identical, it may be contracted in one field and not in the other.

4th. It is unknown on open prairies or in cultivated fields that have been well opened to the sun and have become "tame," although the fields may not ever have been plowed.

5th. It is so safe, that in the experience of my life-time I have known of no departure from the rule —that domestic animals may roam with impunity through the infected districts anywhere, through the day time, providing they are brought to the inclosure or corral before nightfall, and kept there until the fogs and dews have dispersed on the following morning. All the pioneers with whom I have ever conversed hold to this theory, and it fully accords with my own observations.

6th. Wild and unimproved lands, densely timbered, seem to be the favorite haunts of the poison; nor does the quality of the soil or the character of the soil seem to influence the danger or prevalence of the trembles in herbivorous animals that are exposed at night. The rule holds good in the low lands of Ohio, Indiana, the groves of Illinois, or the high and rugged lands of Kentucky and Tennessee, so far as my sources of information have reached. I have long held the conclusion that the theory of vegetable ingesta alone is not based on satisfactory grounds. Within a few miles of where I live I have known inclosed lands, both in Madison and Clark counties, where trembles will develop during any summer of protracted dry weather, when they would not develop of an ordinarily wet summer; while the flora would be supposed to remain the same from year to year. One claim, however, renders this conclusion less conclusive, and that is that in very dry summers the grass crop becomes so much exhausted that the herbivora are driven to eat of such plants as they might otherwise reject.

But on my own farm, near London, Madison county, Ohio,—composed mostly of level, black, alluvial soil—within the last fifteen years I have cleared up and improved from its natural state about seven hundred acres, over much of which the *rhus toxicodendron* and the *eupatorium ageratoides* were abundant, and yet no case of trembles has ever occured there to the best of my knowledge and belief. And the leaves and the tender twigs of the *rhus toxicodendron* are relished and kept closely trimmed by horses, cattle and sheep.

As to the third, or *marsh miasmatic* theory, I think the cause cannot be identical, as the trembles and milk sickness have never been known, it is supposable, in other countries, or in many sections of our own country, where different forms of malarial disease have always been known to prevail abundantly.

As to the fourth, or *deleterious water supply* theory, I think there is something in it. In very dry seasons, the water supply runs low, and the source of supply, in general, probably becomes stagnant and impure.

Within three miles of where I live, I know of three tracts of woodland, of forty or fifty acres each, which remain uncultivated, as they are retained in that condition to keep up the timber supply for the farms. These woodlands are pastured off until about the month of June each year, and again utilized in winter for feed lots for hogs, cattle, etc., with almost certain safety to the stock; but were the stock left there over into the months of July, August or September, in a dry season, trembles would almost certainly appear, as the experiment has not failed, in a dry summer, within the past seventy years. Some seasons, the venturesome owners keep thinking that they will use them for just a few days longer in the summer; when the appearance of turkey buzzards hovering over the woods in large numbers, suggests to them that the food these scavengers covet lies below them, dead of the trembles.

These three pieces of woodland are a mixture of low alluvial and dry elevations, or ridges, timbered mostly with white oak. To rid them of their danger, it would only be necessary to cut off the timber, and let the sunlight in upon the bare unshaded ground.

In one of these pieces of woodland, the water supply is from a spring, which for many years was the water supply for a household of poor non-paying squatters, and in the twenty-eight years that I have attended professionally all families who have lived there, no case of milk sickness has ever occurred, nor more than the usual amount of remittents or intermittents; but no one ever lived there that owned a cow, or were more exposed by reason of milk, butter, cheese or diseased meats, than their neighbors who lived on cultivated farms.

I accept the theory as to the cause of trembles, that it has its origin in disease germs or spores, bacteria, microscopic fungi, etc.; but whatever its cause, I think it is evident that it is

1. *Specific.*
2. *Infectious.*
3. *Incubative.*

PREDISPOSING CAUSES.

Perhaps the most general predisposing cause is fatigue. I should think that half of the cases of milk sickness I have ever seen in women have followed immediately upon a washing-day, or a day of hard work in cooking or entertaining company, and I recall the case of one man who came up out of a well he was digging, and went directly to bed, where he died ten days later.

Among the livestock dealers in milk-sick districts—it has been the custom, since my recollection, to make one of the stipulations in a cattle trade to have the privilege of running the cattle for five, ten or fifteen minutes, as a test for their safety from trembles. If they had trembles, or were bordering on the disease, more or less of them would be likely to show it unmistakably, whilst running, or within a very few hours thereafter.

PERIOD OF INCUBATION.

This, I think, must be somewhat uncertain. I recall the case of a young girl who was a servant in the family of one Dr. A. W. Field, at Amity, Madison Co., Ohio, about thirty years ago. Her fathers family, five miles distant, in the country, contracted milk-sickness, and she went to visit them on Sunday, before the true nature of the sickness had been pronounced. She stayed to dinner, and ate some butter on her bread, but no cheese, milk, or meats of any kind, and returned to the village in the afternoon. On Tuesday, the second day following, she came down with milk-sickness, but had a slow recovery, while all the balance of her father's family died.

In 1867, in the month of August, I was called to see the case of the well digger before alluded to. He was a farmer, living in Pleasant township, Clark county, Ohio, and was digging a well for the use of his family, at his own house. I suspected milk-sickness. He acknowledged that his cows had "stayed out" two successive nights, about a week before, in the Baily Woods, a heavily timbered, unimproved body of land of several hundred acres, adjoining his little farm, and belonging to some minor heirs in Virginia. They declared their cows and calves were healthy; but I went into the barn lot and commenced chasing the calves, and in less than five minutes one of them developed into an unmistakable case of trembles.

The products of the dairy were used no more by any member of the family; but the wife, who was *enciente*, was taken two days after; and within a week I had five cases in the family, all of whom had a slow recovery excepting the husband, who was somewhat intemperate—and that class of cases generally die.

In August, 1869, I was called to see S. M., on the National road, near the line between the counties of Clark and Madison, in Ohio, and within about three miles of the Baily Woods, before mentioned. Malarial remittents were then prevalent, and I failed to get a clear history of his case, as he was deaf and dumb, and his wife a poor interpreter. I concluded to prescribe quinine; which I had administered in whisky, to reconcile him to the bitter taste of the drug. On the following day I repeated the same; but on the third daily visit I found his wife sick, and I suspected milk-sickness. I ascertained that their cow had "stayed out" one night about a week before, and had probably stayed over night in the Baily Woods aforesaid. I went to the pasture and chased the calf around, but without developing any trembles; but by the next day I found the woman with a well-marked case of milk-sickness; and the calf dead of the trembles.

The husband made a good recovery, from a very mild case of milk-sickness, in which there was no vomiting, no retching, but simply the symptoms of the initial stage before vomiting supervenes; whilst the wife died on the twelfth day of her illness, and an only child, a boy, twelve years of age, escaped entirely.

In the winter of 1874-75, I was called in consultation at night, with Dr. James B. Sprague, to see some cases in Brighton, Clark Co., Ohio.

I found the husband, aged about forty-five, a cooper by trade, in *articulo mortis*. I found his wife, about forty, in but a little better condition, as she died about twelve hours later.

Now the question in these cases was, where did the disease come from? A beef had been sold by retail through the town the previous week, and suspicion pointed to that as the cause; and the development of four additional cases in another family, about four days later,—all of whom had partaken of the suspected beef, seemed to strengthen the suspicion; although other families who bought of the beef escaped.

And then another question arises, where and when had the beef contracted the disease? That cattle *may* have trembles in the winter season, is a matter of occasional observation; and the old citizens generally attribute it to the feeding of cattle upon wild or swamp hay. And that suspected animal, it was ascertained, had been feeding from hay cut in a boggy meadow, over which about one hundred acres of the drainage of the aforesaid Bailey Woods spread itself as it sought the sluggish ditch running across the meadow.

The disease germ in the animal may have been incubating since the summer season; but it would seem quite as probable that it was attached to the grasses and survived until the proper nidus was found in the

ingesta of the animal's stomach, when it started to activity and possible multiplication, like a germinating speck of yeast plant.

SYMPTOMATOLOGY.

In the lower animals the disease is called "trembles," from the agitated condition of the muscles in the animal affected.

The first symptom of the disease that is generally noticed, is that the animal is indisposed to exercise. It stands apart from the herd, drooping, languid, with a look of extreme fatigue, and persistently abstains from food.

The second stage is that of trembling, extreme thirst and obstinate constipation. The animal at length can no longer stand, and when it lays down seldom rises again. The decubitus becomes at full length, and the animal becomes a stranger to any manifestations of fear, affection or anxiety. The respirations are slow, the extremities and surface cool, and the eye at length fixed, glazed, and the winking ceases altogether. Death generally follows—occurring, ordinarily, from the eighth to the tenth day.

In milk sickness the patient is apathetic, complains of malaise, weakness, indisposition for exercise, loss of appetite or loathing of food, and sometimes of slight nausea. This condition may run on for several days, gradually becoming more pronounced, when vomiting supervenes, and the patient finally takes to his bed. There are no chills, no rigors, but usually an unsatisfied thirst. The tongue is large, flabby, tremulous, moist, and heavily loaded with a dirty white coating. The temperature of the surface sinks below that of normal. The skin is dry, and sensible respiration suspended. The abdomen is retracted and flabby, and comparatively empty. Peristaltic motion seems absolutely suspended; and from that cause, probably, and the general suspension of alimentary secretions, the bowels become, from the first, obstinately and persistently constipated.

The breath becomes offensive, with an odor that some people claim is peculiar to milk-sickness alone. I am led to believe that this may be so, but my observations do not fully confirm me in the belief. The urine becomes diminished, sometimes to eight or ten ounces a day, and generally clear and limpid. The pulse is variable as to frequency, but is always weak and easily compressible, with labored action of the heart and pulsating aorta. The temperature rises in some cases to 99°, but is usually below normal.

There is a marked degree of hebitude and indifference, and even in cases where the patient expresses no hope of recovery; the ordinary solicitude for the future of the family and friends is rarely alluded to.

There is an intolerance of covering for the body, especially of the extremities; and I recall one case in which the patient would give no rest to the nurses only as they kept his hands immersed in a basin of cold water; and the ordinary efforts resorted to for warming up the extremities usually are attended with an aggravation of the vomiting or retching.

As the disease advances, the exhaustion becomes so extreme that vomiting is superseded by a feeble retching effort, that to be heard once is to be remembered always.

The patient seems to become more and more somnolent; but there is seldom oblivious sleep; and if there ever is, at all, it is of short and fitful duration.

The vomiting first, and the retching in the later stages, continues to the very close of life; or until coma and oblivion shut it off.

In the later stage the fluid ejections from the stomach are tinged like the indigo-blueing water used in laundries.

These symptoms increase as the disease advances; the hebitude assumes a semi-comatose condition; the respirations decrease in frequency, and are variable—sometimes profound and sometimes scarcely perceptible—like the respirations of a hibernating animal. The prostration sometimes becomes profound, the process of winking suspended, and the conjunctiva and cornea become dry and glazed. The hebitude increases to somnolency, and the somnolency to a coma. There is stasis of the capillaries, and the vital forces, yielding one by one, the patient dies without a struggle and almost without a sign. Some cases are mild, like the one of the deaf and dumb man I have alluded to, and in bad cases, when recoveries take place, the convalescence is by slow and almost imperceptible stages. I think I never met with but one case in which there seemed to be a crisis, characterized by a sudden restoration of the functions. This was in the case of a child—a girl about twelve years old, in the family of the well-digger before alluded to. On about the tenth day of her sickness I gave up all hope of her recovery. For two days her coma had been continuous; the process of winking suspended for forty-eight hours, and all signs of vitality nearly suspended. Altogether unexpectedly to me she had a dejection, deep green in color, of about one quart, of the consistency of soft soap. Twelve hours later the respirations had increased by at least five in the minute, and she had been noticed to open and shut her eyelids four or five times. She gradually recovered.

PATHOLOGY.

The consumption of tissue in this disease is limited, and not like the consumption of tissue in continued fevers. There has been no tenderness over the epigastrium, or the bowels, and the post-mortem shows no characteristic symptoms of inflammation in any part of the alimentary canal. The stomach is found empty and the contents of the intestines consist principally of lumps of a dark-colored, dry, tenacious feculent matter—much the same in appearance as the evacuations, whenever they occur in these cases in the course of the disease. I think there are no special characteristic pathological symptoms by post-mortem unless it be the above named appearances of the contents of the intestines.

TREATMENT.

This, to a very great extent, has probably been empirical. The aborigines in Central Ohio, and possibly elsewhere, are said to have placed some reliance on the use of pulverized charcoal, suspended in milk. I used this not infrequently in the early days of my practice, and sometimes have thought that its persistent use did have an influence in allaying the nausea.

Effervescent mixtures—carbonic-acid water or soluble citrate of magnesia, or lime water, however, have seemed to give me more satisfactory results, if I have ever had any satisfactory results from anything. Frequently repeated teaspoonful doses of pure olive oil was a favorite remedy in domestic practice; and I have used olive oil in four-ounce doses, repeated about four times a day, per rectum, but with no appreciable results. Emetics were sometimes used by the botanic physicians; and drastic cathartics—calomel, jalap, etc.—by the rrgulars, in an early day; but probably only with the results of hurrying some off who might possibly otherwise have recovered. Mercury was not infrequently tried, as in mechanical obstruction of the bowels; but I never saw a case so treated which recovered, nor ever saw a globule of mercury that had been passed *per anum*.

I recall the cases of the first family into which I was called, professionally, in the capacity of a medical adviser, in cases of milk-sickness, in the autumn of 1853. The family were residents of Darby township, Madison county, Ohio, on the banks of Little Darby—a .sluggish stream of two or three rods in width. One child was already a corpse, and the father died on the following day. There was another one of the family sick for four or five days; and I recommended the attending physician to give whisky and quinine—a remedy recommended probably for the first time in that settlement. I cannot say if my recommendation was carried out, but the patient recovered.

The next family was in the autumn of 1855, in Monroe township, Madison county, Ohio. One of the cases, a young lady of eighteen, was in the fully developed stages of the disease, and died on the fifth day. Four others of the family—the mother who was *enciente*, in the sixth month, and three children, were simply in the prodromic stage,—with lassitude, hebitude, and slight nausea. There was consternation in the household when the disease was pronounced; and in the prodromic cases I advised stimulating doses of spiritus frumenti, every 4 hours, in the shape of punch, egg-nog, stews, with sugar, or with sugar or peppermint, or straight, as was most desirable to the patient, coupled wfth fresh slippery elm bark mucilage, as a drink, and avoidance of all unnecessary exercise; and none of these four cases advanced to the stage of persistent vomiting, and all recovered within a week or ten days.

Within the last twenty years I have avoided the administration of active cathartics,—as there is suspended peristalsis during the pronounced stages of the disease,—and have confined myself generally to mucilage of fresh slippery elm as a drink, occasional small effervescing draughts, when agreeable to the patient, and alcoholic stimulants either *per orem* or per rectum, in all cases, with better general results than when I vacillated too much from this course, in the earlier days of my practice.

In "trembles" the domestic remedy that was of the most general adoption, was feeding the animal with green corn, freshly cut from the field. If the animal would eat enough to act as a cathartic, it would generally get well.

When I am called upon to prescribe I recommend four ounces of whisky to one quart of water, repeated every four hours. Deaths from trembles seldom occur when this is commenced early in the case and followed up long enough; or until convalescence begins.

MECHANICAL REMEDIES IN THE TREATMENT OF SKIN DISEASES.

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[Read to the Section on Practice of Medicine, Materia Medica, etc, June, 1883.]

GENTLEMEN: I do not propose to read my paper *in extenso* before the Section this afternoon, but while giving its salient points, I shall reserve for publication, in case of acceptation, its entirety.

There are a number of remedies which can be used in the treatment of skin diseases which cannot be classed as drugs, but being mechanical in their application may be appropriately termed mechanical remedies.

They are massage, compression, blood-letting, incision, excision, enucleation, scooping, scraping, setons, and cauterization, remedial measures which have been in vogue almost from time immemorial, but which have been more or less lost sight of, and seldom, if ever, used by therapeutists in the treatment of cutaneous diseases.

These are all valuable agents, as I can attest from a long personal experience with them, and I now will proceed to relate what can be accomplished with these mechanical appliances in skin diseases. I will begin with massage,—the first mechanical agent which I shall consider. Although long and favorably known as a general remedy it has, however, attracted little if any attention as a means of treating skin diseases. Its use upon certain morbid conditions of the integument, when properly applied, is often followed with marked beneficial change and at times with complete restoration of the part to its natural state. Massage not only acts in this way locally, but by its indirect effect when used generally, will add tone and vigor to the entire system. This direct as well as indirect action of this powerful mechanical remedy can thus be put into execution both for its local and constitutional effect in many skin affections. Massage, if employed in its original sense, would simply imply kneading; it has now a wider and more general use, and includes as well a group of procedures known as friction, pinching, manipulation, rolling, and percussion of the different external parts of the body. It can be done with the hand or with the additional aid of some fatty substance, a coarse towel, a hair mitten or a brush. It may be performed also by means of ingenious machines that are now perfected and arranged for doing, what the most skillfull manipulator can do with his hands. It is better, should the hands be used, that the operator should be strong, muscular if possible, possessed of activity and energy, cheerful and intelligent, with some knowledge of anatomy and physiology. If he has not these latter acquirements

he should, at least, possess a thorough preparatory training of manipulation. In addition the hands of the operator should neither be too small nor too large, neither long, bony, doughy, or clammy, but should be both firm, soft, and elastic. Now that I have defined massage and how it is used, I shall next speak of its special forms, their mode of application and their effects. The first and perhaps the most common form of massage used in the treatment of skin diseases is friction. Friction can be employed upon the integument either by patients themselves or by a manipulator with the hands and with the aid of some fatty material, liniment, brush, or a coarse towel, or mitten, according to the special indication in each case.

It might also be well to make circular at the same time with the straight line friction. In thus employing friction the whole palmar surface can be used; both hands moving at the same time; according to the method of Graham the one ascending as the other descends, at the rate of one hundred and twenty-five to two hundred and fifty strokes each minute, or two hundred and fifty to five hundred with both hands. The strokes will necessarily be less rapid on the back and back of the thigh, by reason of the skin being thicker and coarser, the muscles more prominent, and the part to which it is applied longer.

Friction can and is usually made in all directions over a surface without regard to any rule, but it is much better and more efficacious to make it either vertical or circular. For example, in manipulating in this way a limb, the upward or vertical stroke from the extremity to the trunk, followed by the same downward movement, will always favor and not retard the circulation, thus giving a soothing and beneficial influence to the part.

The upward stroke should be strong and vigorous, while the returning one should be light and passive, the palm of the hand, however, still remaining in contact with the surface. The effect of frictional massage is to stimulate the lymphatic vessels and veins to augmented action, and thus promote the absorption of inflammatory products, should any exist, as well as adding tone and vigor to the general system. The vessels in course of disease are not only compressed by inflammatory deposits in the tissue, but are also often filled up with plasma and other material, causing stagnation and a loss of their absorbing power. The object to be attained by using frictional massage in such conditions is to empty by this mechanical procedure the over-distended lymphatics and veins, thus increasing their activity, re-establishing their absorbing power, which will enable them to carry off all deposits and restore the tissues to their normal state. Frictional massage can very often have combined with it such movements as pinching, kneading, manipulation, rolling and percussion. This group of procedures can be advantageously blended at times with friction, more especially when the exudation is very great, the innervation of the skin marked, and the object is for a more decided action upon the superficial and deep parts.

[1]Massage.—Its Mode of Application and Effects, by Dr. Douglass Graham. (*Popular Science Monthly*, October, 1882, p. 725.)

According, therefore, to the requirements of each individual case, one or more of these movements can be combined, used alternately or varied.

Thus friction and manipulation can be employed in turn, modified with rapid pinching of the superficial and deep structures, kneading, handling or picking up and rolling the muscles, followed with quick but gentle or vigorous percussion with the palm or sides of the hand, or the ends of the fingers. The action of these combined and varied movements are decidedly more effective both as regards their direct and indirect effects. The lymphatics and veins are emptied, as has already been stated, of their effete products, whieh cannot return as such, on account of the valvular folds within the vessels. The vaso-dilators are also influenced through the stimulation to the muscular nerves by which the calibre of the vessels are greatly enlarged, thus increasing both the space and speed of the circulation.

Massage employed in this manner not only has this local beneficial influence, but by its alternate contraction and relaxation of the muscles and vessels becomes a powerful aid to the general circulation, furthers nutrition, and is the very best substitute for active exercise.

This general effect of massage Nordhoff shows in his book on Northern California, Oregon, and the Sandwich Islands. In the latter, in particular, he describes how it was employed in place of exercise, being a most valuable device with the natives for aiding digestion, relieving weariness from over-exertion, and both neuralgia and muscular pains. Its beneficial effect in its general action upon the system has also already been clearly demonstrated by Dr. S. Weir Mitchell in his well-known Rest Cure, as well as by Prof. Charcot, of Paris.

Dr. Zabludonski, in a paper read in April (1883), at the Twelfth Congress of the German Surgical Society, held in Berlin, also describes in a clear and vivid manner the physiology of massage. This eminent author based his conclusions of the action of massage upon a number of experiments upon men in different physical condition, as well as upon rabbits and frogs. His investigations "have led him to believe that nearly all the bodily and mental functions could be influenced by the various kinds of massage. The weight of the body is reduced in corpulent and thin persons, but is increased in those of medium build. Capacity for work and bodily strength is increased. The mental processes become more active, and sleep is rendered more sound and regular. The frequency of the pulse is lowered, motility is favored, and sensibility is blunted. These effects would serve to explain the value of the method in affections of rheumatic and neuralgic nature.

Now that I have thus briefly described massage, with its special forms and their modes of application, I wish, in conclusion, to refer to its effectiveness in certain skin diseases. In the dry form of seborrhœa, particularly of the scalp, and in thinning and loss of hair, frictional massage, used with moderation, stimulates and augments the sluggish circulation, furthers absorption, and imparts tone and vigor to the scalp and hair. In indurated acne and in glandular swell-

ings it arouses the activity of the sluggish and choked-up absorbent vessels, and thus relieves the glandular congestion, and the skin again becomes normal in being soft, supple, and elastic, and free from these lesions. It not only has a local beneficial influence upon the class of affections just named, but likewise often removes, or assists in removing, when used over the trunk, many gastric and intestinal disorders which very often keep up the cutaneous irritation. This general effect of frictional massage I have witnessed again and again in relieving and curing constipation and other functional derangements, which are very often active factors in keeping up acne, rosacea, hyperidrosis, seborrhœa, uticaria and eczema.

It is often efficacious in removing scarf, and in cases in which the pigment of the skin is either in excess or deficient in quantity, stimulating to renewed activity the absorbents, and assisting in again restoring the parts to their natural state. Massage, whether made with one or more of the group of movements named, is an invaluable agent in certain neuroses, especially in neuralgia, perverted sensibility, and trophic disturbances of the skin. It exerts in these affections a delightful and pleasing local effect, relieves pain by its sedative and counter-irritant effect, increases the circulation of the blood in the integument, thus lessening its activity in the internal organs, and likewise has as a result a decided tonic action upon the nervous system. Massage as a general remedy is an important and valuable adjuvant in promoting and increasing oxidization in cases of scrofuloderma and in psoriasis. It makes the skin more active, removes effete products from within as well as without, and increases the red corpuscles of the blood. It is not only a good, but even a most useful remedy both, for its general and local effect, in many of the forms of subacute and chronic eczema.

Massage thus applied in some of the subacute forms of eczema, in which the surface is dry, slightly thickened, and covered with groups of papules, will awaken the action of the dormant absorbents, increase the circulation, arrest the intense itching, and very often alone restores the skin to to its natural state. It is, perhaps, in the next variety of eczema, in some of its chronic forms, that massage has been, in my experience, more efficacious and more of a curative agent than in any other of the affections of the skin.

In such cases, where the surface of the skin presents marked infiltration, is hard, dry, rough, thickened, even to a leathery state, and upon which all medication has been used in vain, it will often be found to yield under this appropriate form of treatment.

Massage not only breaks up the exudation, but likewise stimulates the absorbents, and so assists in removing the inflammatory products from the tissues, and restores the skin to its natural soft and elastic condition. In chronic eczema, especially where the parts become covered with confluent patches of papules, and on which there is more or less infiltration, dry, and attended with persistent and obstinate itching, the judicious use of massage will often not only remove the abnormal and pent-up effete products, but will also produce a sedative action on the irritation and give the sufferer a blissful state of repose, followed with sleep, which formerly had been constantly interrupted by the itching.

Before concluding this important mechanical remedy, I wish again to call attention to the fact that massage is valuable in certain skin diseases both for its local and general effect. When it is employed purely as a local agent it is especially advantageous upon certain chronic changes of the skin. It should, however, never be used directly upon an acute inflammatory surface, but can be applied in the early stages of such conditions with benefit above and below the parts in order to afford more area for the returning circulation. It is also well in using massage to follow certain rules and regulations. These requirements I have already partially alluded to in passing, especially the qualities which the manipulator should possess, such as strength, intelligence, and hands adapted to this purpose. Physicians should, therefore, in all cases, at least in the beginning of the employment of the massage, see that the manipulator has these acquirements. The physician should next see that the proper rules and regulations that are necessary in using massage are carried out, by carefully observing its application. He should also note, first, that the part to be treated should be properly exposed, and at perfect ease for the manipulation; secondly, that the hair, should any cover the surface, be well shaved before beginning the operation, otherwise it will interfere more or less with the movements, and often cause considerable irritation; thirdly, that the manipulator should work from the wrists, in which their energy should be spent on the muscles, of the hands and forearms, and not upon those of the upper part of the arms and shoulders. Manipulation performed by this latter procedure will be awkward, unskillful, will quickly tire out the manipulator, and give an unpleasant sensation and motion to the patient.

Fourthly, the movements should be begun moderately and gently, and carefully graduated and increased with both force and frequency according to the exigency of each case and the ability of the patient to bear the manipulation.

Fifthly, the manipulator should exercise great care in stretching the tissues beyond their normal elasticity, which, of course, will vary in each individual, and will vary also according to the extent and length of disease. He should avoid, in particular, stretching the delicate and sensitive integument in opposite directions, more especially in the flexors of the joints, which often tears the skin by this error.

Lastly, the dose of massage should, of course, vary according to the extent of surface treated, and the skill and experience of the manipulator.

Compression.—Compression is another very useful mechanical remedy which should receive more attention from practitioners in the local treatment of skin diseases than is given to it at the present time. It can be applied by means of any substance which will afford rest and support to the affected structures. The means usually employed are muslin, linen, cotton, silk, and gum, used either alone and bound upon the parts, or arranged in the form of bandages, plasters,

or the several materials combined together and woven to the shape of the part to which it is to be applied. The use, in the first place, of the ordinary muslin lightly bound over the surface of many eruptive affections, will not only give rest and support to the parts, but will also exclude them from the air, which often tends to keep up the active irritation. It will likewise retain the application, should any be made, in opposition to the surface, as well as preventing friction and irritation from the clothing, assist in arresting a discharge, should one exist, assist in limiting the disease, and keep at the same time the parts clean. The neglect of this procedure, which is at present too often the case, will keep up the active stimulation, allow the application to run off on the surrounding parts, permit the friction and irritation of the clothing, causing the discharge, should one be present, to increase, the disease to spread, and the parts to become often uncleanly and offensive.

The application of compression with muslin in this simple form, wound or bound around the neck, the axillary region, or the chest, in many of the eruptive affections that involve these regions, is both effective and important additional means in assisting the action of the local medication.

Compression can be applied in the same manner to the breasts should any of the eruptive diseases develop, especially erythema or eczema, and arrest in itself, or assist with medication, in rapidly overcoming the morbid action that would drag on slowly, or often resist the curative action of drugs alone. Again, I know of no one remedy which is so valuable to apply in eczema which involves the folds of the nates and genital regions and the abdomen, particularly in those having considerable adipose tissue to these parts. The use of strips of muslin, or a large abdominal support of muslin, silk, or a combination of the fabrics, made in the form of an apron, lacing either at the sides or posteriorily, will relieve the congestion, arrest the effusion, serve to keep the application on the surface, protect the parts, and prevent friction with the adjoining portions of the integument, and thus limit the disease. Further, the use of compression in this same form in the treatment of obstinate eczema of the scrotum is the best evidence of its value when used, and the effect upon the parts when it is not employed.

The value of muslin, arranged in the form of a support, with mild compression, to the inflamed, thickened and enlarged scrotum, is not only in the support that it affords to the pendulous mass as well as the enlarged blood-vessels, but also the protection and limitation to the spread of the inflammation.

It is, on the contrary, the neglect of its use that often causes the inflamed and œdematous scrotum to irritate the adjacent portions, especially the inner parts of the limbs, which congestion continues to increase with the friction of the two surfaces, until the individual can only move around wtth the greatest difficulty and pain.

Compression, when employed upon the superior and inferior extremities, is usually made with bandages, of muslin, plasters, some woven material, or gum. Bandages may be employed in any one of the usual forms by which the dressing or application can be retained, the parts protected, and equable pressure made upon the surface.

Compression may be applied in the local treatment of erysipelas, and to soothe and protect denuded surfaces of those recovering from eruptive fevers. It is a most important adjuvant in the treatment of herpes, Herpes zoster, urticaria, furuncular, and glandular affections, erythema, and eczema.

In acute eczema, it soothes muscular irritation, tones up the dilated capillaries, and prevents the escape of serosity into the tissues. Again, in subacute eczema it will enable the vessels to remove poured-out products, protect the denuded surface, and exclude the air, which is very stimulating to inflamed and irritable parts, and so moderate diseased action. In chronic eczema of either the superior or inferior extremity, the use of water or oil dressings and local medication combined with systematic pressure with the bandage, will generally afford a most excellent result.

The use of the latter means, it will be seen, causes the dressing to soften up more rapidly the thickened and rough skin, to remove by the constantly graduated pressure infiltration, to equalize the circulation and increase the absorbative action of the medication used upon the surface. This same principle has been utilized with the most beneficial result in the treatment of ulcers of the lower limbs, especially the varicose ulcer. I might add in this connection, that the ordinary muslin bandage will generally answer for all ordinary purposes. I often, however, use (particularly when varicose veins are present) the well-known silk stocking, composed of gum and silk, or gum and cotton together, so as to be quite porous.

While I must acknowledge the great utility of gum by reason of its elasticity and consequent great adaptability in making equable pressure over the whole surface, nevertheless it combines with it other great objectionable features in its use to a diseased integument. The principle of its application as first brought forward by Dr. Henry Martin, of Boston, Mass., was indeed a valuable one, and can be used modified to affected parts of the skin. Gum bandages employed alone have the objectionable feature of preventing evaporation of the normal secretions from the parts, retaining heat and moisture on the surface, thus acting as a poultice, and macerating away the epidermis, which cannot be overcome by applying beneath the gum, muslin and any other substance. The only way this objectionable feature to the use of this valuable agent can be overcome is to have the gum and a silk or cotton material woven together—preferably the latter, for its cheapness. The weaving should be moderately loose, such as in the specimen which I exhibit, so as to have a free porosity over the surface in order to allow a free evaporation of the secretions of the surface to which it is applied.



Compression can likewise be made with plasters, which usually consist of muslin, linen,

or sheepskin, upon which some simple or compound medicinal substance is spread.

They are not adapted for making compression over the general surface, and can be more advantageously used upon certain regions.

Their beneficial influence, cut in strips and applied to the surface, is most strikingly evinced in eczema of the lips.

The mucous surface in this disease is torn open with every movement of the lips, and all the lotions, ointments, and powders will not, at times, soothe the muscular irritation and heal the parts until they are protected and placed at rest. In order to accomplish this purpose, adhesive strips can be made to encircle and allowed to meet posteriorily at the nape of the neck. In this manner the movement of the lips is controlled, the raw surface protected, the irritation soothed, and the disease promptly and effectually arrested.

In removing the adhesive strips in cases of this description, care should always be taken to detach both ends and draw gradually to the centre, otherwise the mucous surface may again be torn open.

While compression can be made with bandages or plasters to the hands and feet for treatment of these persistent cases of chronic fissured eczema, yet their lack of adaptability, their inconvenience in application, the ease with which they fall from the parts, their unsightly appearance and interference with using the members make them very objectionable means to employ. They can only be supplemented in the feet with tightly fitting porous stockings applied over the dressing, or a stocking woven with some gum material in it.

The hands in a like manner can have a cotton or woolen glove, or what I like much better, and which I use, a woolen glove with cotton and gum in the fabric.

The latter form of the glove or any porous material which will fit tightly will retain the application on the surface, allow free evaporation. sooth and protect the parts from irritating substances with which they come in contact, and arrest all muscular irritation that may arise. A woven cotton gum material closely adapted to the parts is equally serviceable in eczema of the popliteal region, the knee, and the ankle. It is requisite always in using compression to apply the substance used so as to support, protect, and place the tissues at rest. Great care, however, should always be exercised in order to prevent making too much pressure on the part and thus arrest the circulation.

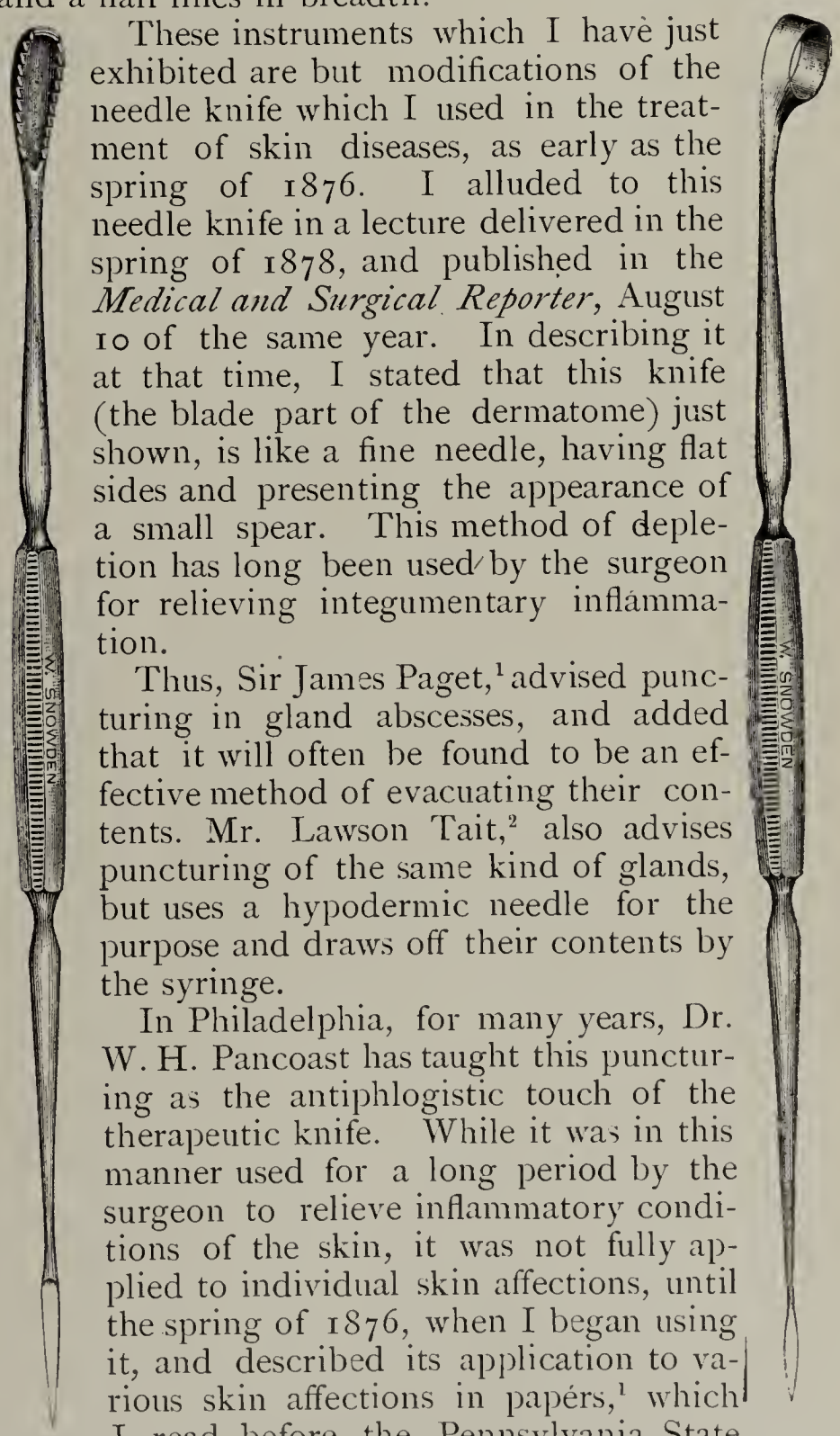
Blood-letting.—The abstraction of blood, either as a local or general measure, is one of the most powerful antiphlogistic remedies that can be resorted to in the treatment of skin diseases.

It is both a speedy and an efficient means of combating and arresting morbid changes of the integuments. It is especially applicable topically in chronic conditions after medicinal agents have been exhausted in vain attempts to cure many eruptive diseases. Blood may be abstracted either locally from the capillaries or generally from a vein or an artery. In the treatment of cutaneous affections by means of blood-letting, local depletion should be used in the great majority of cases, general blood-letting only being resorted to in very rare instances. Topical blood-letting may be performed by puncturing, scarification and leeching.

Puncturing.—Puncturing can be performed either by a bistoury, a tenotome, or a sharp-pointed needle-knife such as I exhibit, and can be named, used in this connection, the dermatome, and is a modification of the needle-knife which I used in the treatment of skin diseases as early as the spring of 1876.

This instrument may contain either a long or a short blade, which I here show in these two sizes for the purpose of convenience and to aid the operator. Upon one end of the dermatome is a spoon, while upon the other instrument on the same distal part is a curett portion which I shall presently refer to.

The first dermatome is about three-quarters of an inch in length, and four lines in breadth, while the second one is some half an inch in length and two and a half lines in breadth.

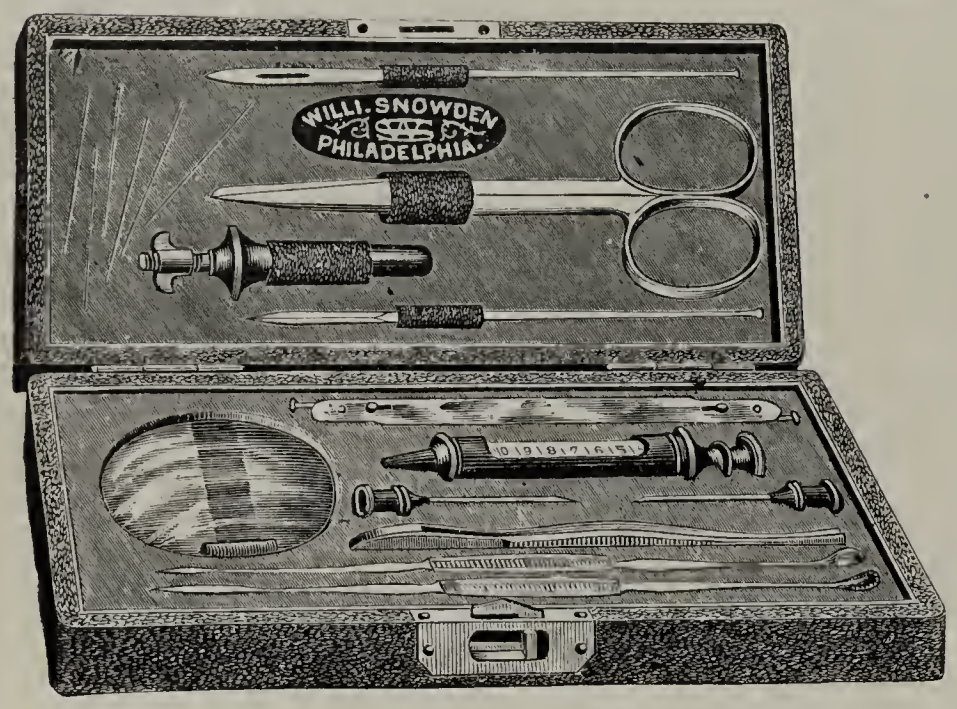


These instruments which I have just exhibited are but modifications of the needle knife which I used in the treatment of skin diseases, as early as the spring of 1876. I alluded to this needle knife in a lecture delivered in the spring of 1878, and published in the *Medical and Surgical Reporter*, August 10 of the same year. In describing it at that time, I stated that this knife (the blade part of the dermatome) just shown, is like a fine needle, having flat sides and presenting the appearance of a small spear. This method of depletion has long been used by the surgeon for relieving integumentary inflammation.

Thus, Sir James Paget,[1] advised puncturing in gland abscesses, and added that it will often be found to be an effective method of evacuating their contents. Mr. Lawson Tait,[2] also advises puncturing of the same kind of glands, but uses a hypodermic needle for the purpose and draws off their contents by the syringe.

In Philadelphia, for many years, Dr. W. H. Pancoast has taught this puncturing as the antiphlogistic touch of the therapeutic knife. While it was in this manner used for a long period by the surgeon to relieve inflammatory conditions of the skin, it was not fully applied to individual skin affections, until the spring of 1876, when I began using it, and described its application to various skin affections in papers,[1] which I read before the Pennsylvania State Medical Society in 1878, and 1879, and before

1 *Medical Times and Gazette*, vol. I., pg. 15, 1858.
2 *British Medical Journal*, vol. I., pg. 117, 1871.
See transactions of the Medical Society of the State of Pennsylvania, vols. XI, XII.
American Medical Association, vol. XXX, 1879, 1878-79.



the Section of Practice of Medicine of the American Medical Association in 1879. As I have already stated in one of the papers referred to, I have employed this method of treatment with success in inflammation of the hair follicles of the beard, in acne, in enlargement of the blood-vessels of the face, in chronic eczema, in excess of pigment of the skin, in erysipelas, in scrofulous eruptions, in boils, carbuncles, and in neuroses. Thus, in inflammation of of the hair follicles of the beard, depletion in this way relieves the engorged glands, and drains off altered and vitiated blood. Further puncturing the patches of lupus erythematosus is a valuable means of relieving the hyperæmia present, as well as resulting with good benefit on the cellular infiltration going on in the derma.

A similar effect is produced in acne, by allowing the stagnated blood and the broken-down sebum to freely ooze from the small incisions.

Again, the abstraction of blood, by puncturing the surface, in enlargement of the blood-vessels of the face and in chronic eczema, especially where there is a large quantity of hypertrophied tissue, is an invaluable remedy. In these diseases it relieves the congestion and stagnation of blood in the vessels, equalizes the circulation, and so stimulates the action of the absorbent vessels, that all deposits may be carried off. Puncturing is equally efficacious in arousing the torpid tissues to activity in excess of pigment of the skin, and in allaying the pruritic troubles of old age. I have relieved, and with appropriate internal treatment, have cured some of the worst cases of pruritic difficulty in old persons by the above method of puncturing over all the diseased surface.

This application blunts the irritation of the cutaneous nerves, and relieves the capillary congestion set up by the morbid condition of the part.

After puncturing the surface, it should be allowed to bleed freely by the application of warm or hot water, either one or the other of which I use in all cases of local abstraction of blood. The relief afforded by this method of treating many cutaneous affections, will be best manifested by patients wishing a repetition of the operation, as has been my experience again and again in both dispensary and private practice.

The spoon at the other end of one of the dermatomes will enable the operator to make gentle pressure upon the sides of cut pustules, abscesses, etc., and allow thir contents more readily to escape. The use of this instrument or any sharp pointed knife or needle for puncturing is not open to the objection of the lancet needle, provided with a stop, so as not to penetrate too deeply in the derma, as described by Hebra (*Wein, Med. Wochenschrift*, Jan. 1878,) or to the multiple scarifier invented by Squire. Knives thus made, can only penetrate so far by their arrangement, while the disease may require within a small space, both deep and superficial punctures.

In employing the ordinary, or needle knife for puncturing, on the other hand, the operator can allow the point to penetrate to various depths, according to good judgment and the thickened condition of the integument. For instance, upon part of the diseased patch, erythema may alone exist, while upon another portion either engorged capillaries, papules, tubercles, or excessive hypertrophy may be found.

The former state will necessitate slight puncturing, while the latter will need deep incisions, varying of course, according to the amount of hypertrophy present. In using the dermatome or knife, I usually hold it in the right hand, and rapidly thrust it into the surface, usually from one to six lines in depth, exercising, of course, great care to avoid puncturing important vessels and nerves. While I thus rapidly puncture the surface, and by the quickness of the incision prevent much pain, I also sponge off the surface with warm water, so that it may freely bleed. This latter procedure, already referred to, will prevent the blood from clotting in the incisions, and thus arrest its flow, will free the surface from the poured out blood, which very often obscures the continued operation. The object aimed at by the operation, is to relieve the congestion and stagnation of the blood in the vessels, to enlarge and equalize the circulation and thus awaken the action of the absorbents, in order that all deposits may be carried off.

When the bleeding is profuse, an impression will be made not only upon the part, but also upon the system at large. The operation may be repeated every second or third day, or according to the exigencies of the case.

SCARIFICATION.—Scarification, the next best means of abstracting blood locally, is not as frequently employed in the treatment of skin diseases as puncturing. It is nevertheless very useful in dividing engorged blood-vessels in an inflamed surface in certain cutaneous affections. It can be performed with either a lancet, scalpel or bistoury, and the incisions should be made in parallel lines and should, if possible, correspond with the long axis of the parts. Incisions passed in this manner, lightly but rapidly over the congested and inflamed surface, divide the engorged vessels in the superficial part of the derma, and promptly permit their contents to escape.

The length, depth and number of incisions must of course vary according to the requirements in each case; care also must be necessary that large veins are not divided.

Scarification is employed chiefly to relieve both irritable and indolent ulcers, especially of the extremities.

It is an exceedingly valuable method, which I have long used in ulcerating lupus, in connection with scraping and local medication.

Scarification is also efficacious in relieving the engorgement and preventing gangrene in phlegmonous erysipelas. The operation may be repeated every second or third day, but the bleeding should always be promoted by the free use of warm water. It may also be well to add in this connection, that in some cases the depletion that may supervene may be very great, giving rise to marked systemic effect, even leading to syncope. The operator should therefore exercise great care in making the incisions, so as to divide only the superficial capillaries, unless he aims to have a systemic as well as a local impression, in which event deep cuts are advisable.

Leeching.—Leeching is another mode of topical bleeding that may be used in some cutaneous eruptions. It is, however, much inferior and much less applicable than puncturing and scarification. It can be resorted to when it occasionally happens that some individuals have so much fear of being cut with either a knife or needle, in which event the European or American leech can be substituted for either the puncturing or scarification. Again, leeching may be used in place of the latter two methods by means of an instrument called the artificial leech, which consists of a small scarificator, a cup and an exhausting syringe. Leeching is applicable to the same class of skin affections which have been named in puncturing. It is an especially effective local method of treating erysipelas and all glandular enlargements.

Venesection.—Venesection (or opening one of the larger veins, generally at the bend of the arm, and allowing the blood to freely flow until followed with a systemic impression) has brought, in some instances in my hands, most decided relief in certain skin diseases. Generally bleeding should only be resorted to in those in which the individual is strong, robust, and shows every evidence of a plethoric state of the system. In such subjects speedy and efficient good will often follow general blood-letting. Thus I have had the most happy effect result from general bleeding in some cases of acute eczema, in which the local inflammatory action and the general irritation of the system both subsided. Again, in some cases of general psoriasis, I believe I have seen most excellent results follow bleeding. Venesection, used in certain skin affections, weakens the action of the heart and lessens as a result the circulation, and consequently lessens the temperature and congestion of the integument. It likewise lessens the irritability of the nervous system, renders the blood more healthy, and assists both locally and constitutionally in promoting the action of other remedies.

Incisions are employed upon the integument with the knife, whether the bistoury or scalpel, for the purpose of exposing, dividing, or removing the parts. One of the chief values of the incisions is to expose tumors in the skin, which can often afterwards be removed by other means, which I shall presently refer to. It is in this way we often deal with sebaceous cysts and lymphatic enlargements. Incisions may be employed for the purpose of dividing the blood vessels, and thus abstracting blood from a part, as already alluded to, under scarification, or cut off an abnormal and often excessive supply of blood to a portion of the skin. It is thus that the latter procedure is often resorted to in arresting the developments of feruncular affections, warty growths and the enlargement of the blood vessels in rosacea. It is a method that has been advantageously used, especially by Nussbaum, to arrest and assist in curing obstinate ulcers. This local means of treating old ulcers is particularly prompt and satisfactory, the patients being narcotized, a circumcision, as recommended by Nussbaum, is made around the ulcer, and half an inch beyond the circumference or outer rim of the sore the incision must be of sufficient depth to penetrate to the facia." A large number of blood-vessels are thus severed, often causing considerable hæmorrhage, which can be arrested by inserting into the incision a piece of lint, and tightly compressing the ulcer with a bandage.

The strip of lint thus inserted not only arrests the bleeding, but also prevents the cut from healing up during the night. On the following day the lint and bandage can be removed and the ulcer dressed. Ulcers treated by incisions in this way have thus cut off from them the excessive supply of blood that produces so much unhealthy pus, which now lessens and becomes laudable. The supply of blood having decreased, there is consequent less exudation; cell-formation is now permitted to go on, and the ulcer gradually decreases in size until it entirely disappears. A free incision into abscesses, suppurating glands and through sinuses will not only evacuate and drain off the pent-up material, but will also give the diseased integument an opportunity of healing properly from the bottom, and thus avoiding unsightly scars.

In the event that any unsightly scars should arise from either neglecting the above procedure, or from other inflammatory affections of the skin, they may be removed or improved by a subcutaneous incision, as proposed by Mr. Wm. Adams.[1]

Incisions are likewise made into local inflammatory patches, as in sycosis, in erysipelas, and in carbuncles, to relieve the tension of the parts, to divide some of the sensitive nerves, as well as to afford a free exit to the pent-up inflammatory products. Incisions may be resorted to for the removal of a portion of the integument, they are not necessarily followed, however, by severing the normal or abnormal tissue from the part, unless the cut, or cuts, are made expressly for that purpose. When they are made for cutting off the tissue it constitutes more properly, another mechanical procedure which I shall now refer to.

Excision.—Excision consists in the removal of a part, either by incision of the knife, by ligature, or by crushing. Warts, horns, pigmentary and hairy moles are often eradicated from various portions of the integument by excision with the knife. Excision by the knife is also largely used for extirpation of many of both the benign and malignant tumors of the skin.

Callosities, as well as curved, twisted, and excessive growth of the nails, are often only manageable by ex-

[1] *British Medical Journal*, vol. 1, p, 534. 1876.

cision of a certain amount of the offending material by means of the knife. Excision may be resorted to by the same means for removing chancre, and thus lessening the local spot of irritation as well as decreasing the power of the infecting patch.

In case that children or adults, more particularly the latter, have several superficial dense indolent glands, which have resisted and been intractable to all ordinary treatment, excision will not only often prevent the neighboring glands from being affected, but will also avoid the evil effects of prolonged suppuration and its ill consequences that may follow.

Disfiguring scars, particularly when there is a change of color in the skin, the surface is rough or irregular, often attended with the formation of prominent bars and ridges of scar tissue may be conveniently and advantageously excised, leaving usually a simple but clean scar, where formerly existed an unsightly deformity.

Excision may likewise be performed through the agency of any substance that can sever the tissues, either by a rapid or slow process, as by the galvanic or thermo cautery, by the ligature and by crushing.

The galvanic cautery, which is the generally preferred method of excision by the cautery, is usually performed with a loop of platinum wire connected to a suitable galvanic battery, and is both a rapid, bloodless and powerful mechanical means of removing many of the hypertrophic growths of the skin, especially horns and warts.

It is particularly applicable to eradicate venereal warts and pedunculated tumors of the skin. The ligature, whether it be constructed of silk, flax, gum, wire or animal tissue, can be advantageously employed, only, either by the fingers or by means of a needle, in excising by slowly strangulating all the included strictures. It is a bloodless operation, often being the very best mode of removing nevoid formation and vascular warts from certain regions of the body.

CRUSHING is another very excellent mechanical means of excising parts, as proposed by Chassaignac, of Paris, which, although less rapid than the knife, is still greater than with the ligature. This crushing instrument, the ecraseur, consists mainly of an articulated chain or wire which embraces in its loop, once applied, the tissue, which is gradually but effectually crushed by slowly turning the handle of the ecraseur to which the chain is attached. It not only possesses the combined advantages of the knife and the ligature in excising many hypertrophic growths of the skin, but it also leaves a small wound, which is usually attended with slight inflammation and rapid healing.

ENUCLEATION.—Enucleation is a form of avulsion, and consists in rapidly peeling out diseased structures either with the fingers or some hard substance, generally the handle of the knife or forceps. It is a method often employed advantageously after the skin and capsule has been divided over morbid growths. It is in this way that enlarged lymphatic glands, often deeply situated in the neck, are removed with perfect safety, and the operator running no risk of wounding any of the important blood-vessels in that region. It is also, perhaps, the easiest and most ready means of extirpating sebaceous cysts.

SCOOPING.—Scooping is a species of enucleation, now much in vogue, for removing with a smooth or sharp spoon broken-down products and pent-up secretions. It is an invaluable method of emptying cutaneous abscesses, sinuses, and certain kinds of strumous glands. Dr. Clifford Abbott, in a paper read at the last meeting of the International Medical Congress, states that the result of such operative procedure has at least equalled his own and Mr. Teale's most sanguine hopes. Dr. Von Lesser, in an article on the treatment of strumous glands, in the *Central f. Chirurg.*, also uses the same procedure. He first punctures into the gland, after which he introduces through this wound a small sharp spoon, and scrapes the interior of the gland, by which he claims the disease is cut short, ulterior dangers are avoided, and unsightly scars prevented. Scooping out of strumous glands by a Volkmann's spoon is also advised and highly recommended during certain stages of their development, by Dr. Frederick Treves. In resorting to the spoon, it should be upon those cases which have usually resisted treatment, and in which the glands are closely adherent to the skin. Further, all evidence of active inflammation should be absent, and the glands themselves should either be becoming soft or be softened. Glands in such a condition can either be attacked through sinuses, should they exist, or by puncturing or incising the integument and then passing in the spoon and scooping out the soft, cheesy portions, which readily yield and come away. A material is thus rapidly removed which would require by nature's process a long and tedious time to eliminate, attended with general derangement of the health, in addition to the local disfigurement that often follows. If, on the other hand, the spoon should be employed on glands that are freely moveable under the skin, the products might escape from the glands into the loose cellular tissue that may be opened up, giving rise to the formation of abscesses, sinuses, and their evil consequences.[1]

SCRAPING.—Scraping, although a very old mechanical procedure of treating some cutaneous affections, unfortunately is not receiving at the present time the consideration and attention to which it is intrinsically entitled. It is but a modification of scooping, just considered, and can be used by means of the spoon, providing a little more force is applied.

Scraping can be performed by means of any hard substance employed with a certain amount of force, to bring away any material from or within the integument.

It is usually employed with the side, back or handle of a knife, but often the forceps, scissors and groove director are brought into requisition for the operation, The modern instruments, however, which are especially designed for scraping, are the spoon, smooth, or a little roughened, and a round or oval instrument something like a spoon, having a hole through its centre to permit all substances to

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1. A full account of this form of treatment will be found in Scrofula and Its Gland Diseases. By Frederick Treves, F.R.C.S., London, Eng., 1882; p. 191.

escape through, with the edges moderately sharp, called the curette.

The object of this instrument is to tear and break down the parts to which it is applied, generally diseased tissue, or abnormal products. The purpose of this method is to rid the surface, or parts within the integuments, as much as possible by means of this mechanical procedure, of morbid products, thus facilitating, as well as assisting, local remedies to act more rapidly and bring about a cure.

Scraping, as has already been stated, can be accomplished by any hard substance, and probably not any one is better than a sharp sea-shell, which has been used and handed down from the early times in certain parts of Egypt. Thus Dr. Josiah Williams, in an article published in the *British Medical Journal* on medical notes of travel in Egypt, speaks in this manner of the native treatment of syphilis in young girls:

"Close to the town (Souakin) in the Red Sea, is a little island, called originally Sana Gin, and from which the town takes its name.

"The girl is taken across to this island by six women; she is then laid naked on her back—on each arm and each leg sits a woman, another on her chest. The operator, another woman, provided with a sharp sea-shell, scrapes away in the vagina until she is satisfied that all diseased parts are removed, and then, utterly regardless of the shrieks of the girl, gets a handful of sand from the sea, and rubs that in.

"The disease is then supposed to be cured by this rather rough operation."

This primitive method of scraping away diseased tissue has been used from the most remote times, more particularly along the sea-board portions of various countries by the natives. It makes very little difference, however, whether the morbid tissue be scraped away either by one or the other ways—just so the offending portion, or as much as can be, is removed as well as possible from and among the healthy tissue.

The application of scraping is, perhaps, no better illustrated upon any class of cutaneous affections than upon strumous, broken-down lymphatic glands. In very many of these cases it will require more than the ordinary scooping out, the parts within as well as without being covered with exuberant granulations, disfiguring sinuses filled with filthy discharges, all of which must be eradicated by thoroughly scraping off and out of the tissue these abnormal products, to save the system from being poisoned, and to bring about some local beneficial effect.

Scraping is equally efficacious in assisting old, indolent abscesses, and bubos complicated with the development of unhealthy granulation. It removes from the parts an offending material, which nature is often unable to overcome, and places them in a most suitable state for other applications.

In epithelioma, in old ulcers, and in ulcerating lupus, scraping is often an essential, as well as a requisite, part of the treatment.

In warts, horns, and callosities, it is usually necessary to scrape the hypertrophies well before applying local medication, providing it is the aim to arrest these affections by this method of treatment.

In some old and exceedingly chronic cases of circumscribed psoriasis or eczema, where the surface is covered with thickened scales or hard and unyielding crusts, no means will act half as advantageously as scraping off these products and afterwards medicating the surface beneath by a seton. A seton in the form of a thread of silk is occasionally used for the treatment of gland tumors. The measures already enumerated, or that to be described will be found however, in the majority of cases, far more preferable. The employment of the seton in cutaneous affections, therefore, is very limited, being applicable only in particular to indurated glands in which the object is to effect their elimination by suppuration. In the event that it is decided to use a seton, a silk thread should be selected for that purpose, and passed entirely through the long axis of the gland. This mode of treatment will within a few days cause the gland to take on active inflammation, which will terminate in suppuration in from three to four weeks.

Cauterization.—Cauterization can be performed, in addition to the use of caustic medicinal remedies, by heating a metallic substance to a high degree of temperature, or by means of the solar rays and a lens, and thus accomplish the same result through the burning-glass. The mechanical cautery, as usually employed, consists simply of variously shaped pieces of iron fixed in wooden handles, although needles, pins, and other metallic substances can be heated in the ordinary fire, spirit lamp, or brazier to either a white or dull red heat and rapidly applied to the affected integument. While the measures just enumerated are the most commonly employed, yet it is often very difficult to maintain and control them according to the degree of temperature required by the operator. For instance, in one case a white heat may be desired, while in another a dull red or black heat may be required; consequently the effects of the application of these different degrees of temperature will greatly vary. Another and more efficient method of applying heat has been made in the form of the galvano and thermo-cautery, means which will enable the operator to have the temperature perfectly under his control at all times. The application of the actual cautery in some of the more common cutaneous affections has proved of inestimable value, and in many diseases has superseded the use of local medicinal substances. Thus its use in feruncular affections has been productive of the most happy results. Especially has it been efficacious used, preferably in the form of Pagnelin's thermo-cautery, in the treatment of carbuncle. In this affection, particularly where there is a tendency to great exhaustion from excessive and protracted suppuration, the thorough application of the actual cautery will lessen the liability to such a condition, will quickly promote a separation of the dead tissue, and will prevent, as has been shown by Vermeuil, Post, Connor, and particularly by Langenbeck, the development of pyæmia.

Decidedly good results of the actual cautery are also well seen in its application to old ulcers, exuberant granulations of the skin, in epithelioma and in ulcera-

ting lupus, which may either limit these affections and lessen suppuration, or be followed by the formation of a healthy granulating surface, which soon cicatrizes, with less deformity in the shape of scarring than by almost any other method of treatment.

It can be used advantageously in angioma, nævus chancroids, elephantiasis arabum, in destroying the vessels and hypertrophied tissue in the second and third stages of rosacea, and for the removal of horns and warts. Dr. Cellier in a recent issue of the *Journal de Med. et de Chir. Pratiques*, recommends the following novel means of cauterization for the removal of warts. An ordinary pin is passed through the base of the wart, the skin protected, after which the head of the pin is heated in the flame of a candle, causing the hypertrophic growth to become white, fissured, and to come away in a few minutes on the point of the pin.

Dr. Cellier further adds, that it is only necessary to remove one wart, though there may be a dozen present on the part, all the others will disappear without treatment. Pins or a shoemaker's awl thrust into nævus at a black heat, as was suggested in a clinical lecture by Dr. Jas. L. Little (*Medical News*, May, 1883), will often effect a cure and leave but a slight cicatrix. It is probable that one of the very best curative measures that can be used for scrofulous glands is in the form of cautery puncture. The thermo-cautery points employed by puncturing the glands with it in this manner has been long used with great success in France. It has been equally efficacious in England, and especially practiced and described by Dr. Frederick Treves. It is a method that is applicable to any enlarged gland, preferably those which are adherent. It is necessary in making this application to fix any of the moveable glands by seizing them between the fingers, after which a medium cautery point, having the thickness of either a No. 7 or 9 American bougie (the size of the point, of course, varying according to the dimensions of the gland enlargement) is passed rapidly through the skin into the gland and twisted around within its substance, after which it is withdrawn. The ordinary dressing follows, unless pus or a soft cheesy material escapes, in which event a poultice applied will be very advantageous. If the gland contains no pus or soft cheesy material, a slight acute inflammatory action sets up, attended with a little enlargement and discharge. These effects quickly subside, owing to a healthier action which has been established by the operation. The gland slowly shrinks and a permanent cure soon follows.

If pus and broken-down products are present, the opening thus made will give them a free exit, the suppuration gradually lessens, and the part heals up within a favorable period of time.

In circumscribed, thickened and infiltrated spots of eczema, which do not yield to the ordinary treatment, the application of the actual cautery has been followed, in some typical cases under my care, by complete recovery.

In conclusion, let me add that these mechanical remedies, just enumerated, may be used separately or combined, or they may be employed in conjunction with constitutional treatment, and with the assistance of certain appropriate local medication. In some cases they can be used alone, at the very beginning of certain cutaneous affections, with decided curative results. In others they will often be found to be invaluable adjuncts in arresting some very obstinate cutaneous affections. In still other instances they are the only means that can be resorted to after medicinal remedies have utterly failed.

It is this latter class of intractable chronic skin diseases to which, in closing, I wish especially to commend the mechanical remedies as being very often curative. It is necessary, however, to state that if one or the other of the remedies that have been named be selected and employed, it should be done with good judgment, skill, and a thorough knowledge of the subject under consideration. For example, in employing massage the operator should have a certain knowledge of physiology, anatomy, and be thoroughly versed upon medical rubbing, otherwise more harm may be done than good accomplished.

Again, in resorting to blood-letting, compression, cauterization, etc., sound judgment, combined with great care both before, during, and after such procedure, is always essential and requisite to accomplish in a satisfactory manner the desired result. If, therefore, these mechanical means be suitably handled by physicians, they will be found to be at all times powerful remedies for many of the so-called incurable skin diseases.

THE ALIMENTARY CANAL IN BRONCHITIS AND PHTHISIS.

BY THOMAS N. REYNOLDS, M.D., DETROIT, MICH.

[Read to the Section on Practice of Medicine, Materia Medica, etc., June, 1883.]

An abnormal condition of the alimentary canal and necessarily of the portal and lacteal systems proceeding from it, is often the predisposing cause of both acute and chronic affections throughout all parts of the entire respiratory apparatus.

But speaking here only of bronchitis and phthisis, and first of bronchitis, we may say that acute tracheo-bronchitis is frequently produced by excess in the dietary, with proportionately incomplete waste elimination. Of course there is generally an exciting factor, most commonly chilling of the surface, but that relating to ingestion and elimination is in the mass of cases to which we refer—the great underlying principal cause, which only needed some slight provocation to produce an attack. An unusual general fullness of the blood-vessels renders the body more susceptible to local congestions; and when, added to the fullness there is the sepsis of retained and reabsorbed tissue waste, congestions become true inflammations, which are purulent in character, largely in proportion to the amount of retained excrementitious matter.

In young and otherwise healthy subjects of acute tracheo-bronchitis, this condition of body is usually the principal obstacle to a speedy recovery.

With this fact in mind, the treatment should be prompt evacuation of the bowels, and restriction of the diet to a light liquid form, and quiet and an equably warm surface should be maintained. If severe, the patient should be ordered either to bed or a comfortably warm room, and in any case he should be clothed a little extra and warned against becoming chilled. It is quite as important to protect the lower extremities from cold as it is to protect the chest, and not less important during an attack to protect the wrists and arms.

The cathartic removes obstruction and promotes elimination from the intestinal mucous surface, and abundant warm drinks do the same from the great secreting structures of the kidneys and skin. The withdrawal of solid food soon brings about sufficient depletion of blood, and the withdrawal of fats and nitrogenous substances at the same time, lessens the excess of animal heat, produced probably more largely by the assimilation and disassimilation of these two elements of vital force and tissue construction, than by that of any other elements of food supply.

Besides the depurating effect of the cathartic and the hot drink diet, a revulsion of nervous energy to the bowels, kidneys and skin takes place from the excited vessels of the inflamed tracheo-bronchial mucous membrane, which cannot usually be excelled, and probably not equalled, by aconite or veratrum viride or any other medical material.

This revulsion of nervous energy and vascular excitement will also be permanent, if warmth of the surface be likewise observed.

This should be maintained by means of extra clothing or sitting near the fire, rather than by heating too much the atmosphere of the room.

If these features in the management are really enforced, no other treatment is necessary in uncomplicated, acute tracheo-bronchitis.

Astringent, stimulant, and saccharine cough mixtures commonly used, have neither theoretically nor practically any beneficial influence over the affection. On the contrary, they tend to prolong it by a deleterious action on the stomach, bowels and liver, and in some degree also on the kidneys and skin.

If medicines be resorted to at all in the first stage, the best, both in theory and practice, are full doses of morphine and quinine, either separately or combined, or small frequent doses of aconite or veratrum viride. But these do not usually equal, either in immediate or ultimate results, the treatment without special drugs, which we have previously outlined.

Whatever be the treatment, it is a great desideratum to cut the inflammation short, for besides the tendency to extend to the capillary tubes, which renders it immediately dangerous to life as well as more damaging to lung tissue proper, an ordinary bronchitis, when prolonged and purulent, often necroses and thickens irreparably parts of the mucous membrane, and produces fibroid thickening of the contiguous peribronchial connective tissue, and always, especially when severe, renders the patient much more susceptible to a succeeding and probably worse attack. Every succeeding attack adds an increment of damage and functional impairment to the bronchial and pulmonary tissue, and the patient then has more or less wheezing, asthma, emphysema, perceptibly impaired elasticity in breathing, with a catarrhal and fibroid phthisis pulmonalis always impending, and this is chronic bronchitis, which we try so especially to avoid when treating the acute.

If derangement of the primæ and secundar viar is causative of acute in the healthy, it is more so in those previously affected, especially if there be loss in the bronchial mucous membrane. There is in the chronic form the same necessity for harmony between the food supply and assimilation, and disassimilation and elimination.

But an older person bears excess in the dietary much worse than a younger, for his capacity is not so good for extraordinary efforts in constructive and destructive tissue metamorphosis, or for performing the more purely chemical changes.

So any unusual high living, without sufficient accompanying exercise, will invariably increase the chronic bronchitic man's cough, and if his diet be not properly regulated and the emunctories slightly stimulated, he will be likely soon to have increased expectoration, or a pronounced attack of the acute.

The different so-called expectorants rarely do any special service, and many do very serious harm in chronic bronchitis by interfering with both gastro-intestinal and hepatic digestion. But if the secretion be abundant and purulent, gr. ii or iii of quinine four or five times a day, proves generally very beneficial; lessening the secretion of pus, without impairing digestion, and improving the tone of the vascular system.

As to diet, it is not wise to press stimulants and strong nourishment, when not readily and perfectly digested.

As to clothing, while it should be sufficient in the elderly bronchitic patient, it should not be excessive. A common mistake is that of wearing too much on the chest. I have seen a few cases of striking improvement in patients going about, from removing two or three extra undershirts and a chamois leather lung protector.

Physical exercise involving free use of the lungs restores wonderfully their normal elasticity, after an attack which has left thickening of the peri-bronchial connective tissue. It dissipates the thickening and adhesions, just as continued free motion dissipates the thickening and adhesions from around a recently inflamed joint. This is important in the lung for other than immediate comfort in breathing; for if there remain no hyperplasia of connective tissue there can follow from it no subsequent sclerosis and degeneration—in other words, no fibroid phthisis.

To prevent catarrhal phthisis proper is, nearly always, to prevent too frequent and prolonged attacks of suppurative bronchitis.

To treat properly catarrhal or advanced fibroid phthisis, either separately or combined, is to treat it as one would an inaccessible suppurating part anywhere else, not by cod-liver oil or any other supposed specific alone, or by specifics at all, if they nauseate, or in any way interrupt or interfere with normal di-

gestion. But a frequent and sometimes liberal use of quinine is immensely useful in these suppurating lesions, reducing body heat and the secretion of pus, and acting otherwise as mentioned in speaking of suppurative bronchitis.

If early in its course, the patient should cultivate an out-door life, with plenty of physical exertion, and wholesome mental occupation. Under this *régime*, digestion will soon become perfect, tissue building will go on properly, the lung cavities will become more firmly circumscribed, and will often cease to suppurate, rendering recovery complete.

One is often asked what is the best region to go to, but probably any region free from malaria or other unwholesome emanations, with a temperature permitting an almost constant out-door life, with exercise, will answer the purpose.

I shall not refer to tubercular phthisis, further than to say that it has sometimes also seemed to me to be excited or produced, in those of tubercular family history, by a profuse and prolonged bronchitis, which, in turn, followed upon a prolonged constipated habit and general defective elimination, caused again, in its turn, by inactive in-door life.

In dyspepsia with constipation and septic fermentation of the ingesta, it would seem not impossible that the septic products which result, may be carried by the portal and lacteal vessels direct to the pulmonary arterioles and capillaries, and be there sometimes auxiliary in causing bronchitis and phthisis, in any or all of their forms.

MEDICAL PROGRESS.

NEW REASONS FOR THE USE OF WOMAN'S MILK IN NURSING.—M. Béchamp has discovered for us a new element in woman's milk, by which it differs essentially from the milk of other animals, not only by its density, quantity of sugar, of fats, of salts, and of water, but by the presence of a special ferment which modifies considerably its digestive qualities. This ferment is called zymase by M. Béchamp, and its history classes it among the microzymas, which he considers as integral parts of the normal tissues of the organism. It is these microzymas which, becoming diseased, are converted into bacteria. This zymase has the property of converting starch into sugar. In cow's milk, besides the caseine, there are two distinct albuminoids, one of which is soluble in water after being precipitated by alcohol—this is galactozmase which is capable of dissolving the starch of farinaceous substances, without converting it into sugar. The zymase of woman's milk has the saccharifying property. To obtain it, the woman's milk is slightly acidulated by acetic acid ; then is added at least three times its volume of alcohol, 90 centesi. The albuminous precipitate, which is very abundant, is received on a filter, washed by weaker alcohol to remove the sugar of milk, the fat removed by ether, then treated with distilled water. After the lapse of several hours it is again filtered, and the solution obtained possesses in a high degree the property of dissolving and converting into sugar the starch of farinaceous substances. To study this new zymase properly, Béchamp used 500 cubic centimetres, but to verify the fact 20 to 30 cubic centimetres will be sufficient, and in using 10 cubic centimetres of water to dissolve the precipitate, the solution should render fluid and convert into sugar 20 to 30 cubic centimetres of starch to the twenty-fifth part of the farinaceous substance used. To avoid all error, it is well to wash the breast with water slightly mixed with creosote, and to receive the milk in vessels washed by the same. The milk tested has been taken from the breast just before, just after and during the nursing by the child, and the results are always the same.

The important conclusions so reached are, that no milk from other animals can replace the woman's milk; they are very different in character, and furnish a strong reason to the practitioner for encouraging nursing by the mother or by some other woman. Again, this explains the benefit of still nursing from the breast after the infant has begun, at 4 or 5 months, to use farinaceous substances, which has seemed to some to be superfluous, or even dangerous. According to experiments, a nursing of 50 grammes gives enough zymase to make 40 centigrammes of glucose, which, added to the ferments of the saliva and of the pancreatic juice, gives the child at the breast at least three products of secretion capable of transforming starch into sugar, and assisting in its absorption. We are warranted, then, in concluding as follows :

1. The woman's milk contains ferment capable of saccharifying crude or cooked starch.
2. The special nature of woman's milk, due to the presence of zymase, renders it preferable to all others.
3. An equivalent for woman's milk cannot be found in the milk of the cow, the bitch, or the ass.
4. The milk of domestic animals, pure or mixed, may be taken when woman's milk cannot be had, but it is not of the same value.
5. We should, as far as possible, nourish infants at the breast in preference to all other modes of nursing or artificial feeding.
6. When children are old enough to partake of farinaceous food, woman's milk is still useful in converting the starch into sugar.—BONCHUT, *Paris Medical*, June 2, 1882.

THE SALIVARY DIGESTION OF STARCH BY INFANTS.—This writer used for his purpose corn-starch previously boiled, cooled into a paste, put into little linen bags, and given to infants to suck for two minutes at a time. Pary's test was then used ; the corn-starch paste exhibited before the experiment bore no evidence of sugar change. The linen was thoroughly boiled without discoloration of the solution. The bags with their contents were in each case thrown into a test tube. These observations are given in tabular form, in twenty-one cases of children varying in age from six days to seventeen months. The sugar change was noted in all but three ; one of these was a babe six days old (fed on breast milk), whilst in another babe seven days old a marked reaction was observed (also fed on breast milk). Five of

these cases, relatively 4 months, 5 months, 8 months, 13 months and 17 months, fed on corn starch and crackers, were recorded as follows: First, well marked; second, slight; third, breast and crackers marked; fourth, well marked; fifth, condensed milk, none. The writer makes the following conclusions:

The saliva of some infants possesses the property of converting starch into glucose, regardless of age. When such a condition is found to exist, a small quantity of well-prepared farinaceous food is valuable as an element in the diet, incorporated with mixed cow's milk. We would add, in view of the recent experiments by Béchamp, that the food be better mixed with the breast milk of the nurse.—KEATING, *Boston Medical and Surgical Journal*, July 12, 1883.

THE FÆCES OF STARCH-FED INFANTS.—This is a record of the examination of the fæces in 24 cases of children varying in age from 45 days to eighteen months, and fed on condensed milk and crackers. The presence of starch was exceptional, and apparently in no degree dependent upon the age of the child. The stools of eighteen out of the twenty-four contained either no starch or but a trace, that is, no more than is frequent in the evacuations of a healthy adult upon a mixed diet. Six of these specimens were from children of three months or less, the youngest being but forty-five days old. In many cases the broken and empty cellulose envelopes of the starch granules were clearly discernible.

The six infants in whose evacuations a noteworthy amount of starch was present, were aged respectively three, four, ten, thirteen, fourteen and seventeen months. The eldest two were in very bad health. The facts presented, appear to justify the following conclusions:

First, that many infants of under three months can digest starchy foods.

Second, that the individual variations in this regard are so numerous that no broad and general statement can be made as to the period at which infants begin to digest starches; and

Third, that the physician can be absolutely certain that a farinaceous ingredient in the diet of a young infant is beneficial only by an examination of the dijecta under such diet.

This paper was read June 6, 1883, before the College of Physicians of Philadelphia, and in the discussion which followed, both Drs. Keating and Randolph mentioned, as of interest in this connection, cases where fat was found in the fæces, after inunctions of cod-liver oil had been used.—DR. N. A. RANDOLPH, —*Boston Medical and Surgical Journal*, July 19.

SPINA BIFIDA SUCCESSFULLY TREATED AFTER THE ROBSON METHOD.—Dr. R. I. Hayes, of Rochester, N. Y., reports a case in the *Medical Record*, where he followed the new method laid down by Mr. Robson, of Leeds, England, in the *British Medical Journal*. The patient was a female of 9½ weeks, the tumor in the lower dorsal region was more than twice the size of a hen's egg; fluctuation was felt readily with one hand on the tumor and the other over the anterior fontanelle. Aspiration was used first, five to six fluid drachms being all that could be obtained; the tumor was then dissected, and a double sac found, the outer sac not communicating with the spinal canal, but being the source of the fluid aspirated. The true sac was then aspirated. On the introduction of the needle, the patient collapsed, was restored, and ten fluid drachms removed and the sac opened; the superfluous portion of the membranes were then removed, and union formed by six interrupted catgut sutures. Some twenty small grafts of fresh periosteum from a rabbit were introduced on the surface of the membranes, and the external flaps, fatty tissue and all, trimmed and closed. Union occurred throughout the wound by first intention, at all but one joint. Here a sinus existed, through which clear serous fluid drained very freely—several fluid ounces daily for four or five days, then more and more sparingly, until the tenth day, when the sinus at once closed. Eleven weeks after the operation, the child is remarkably bright, the tumor is reduced one-half in size, of the feel of fatty tissue, not especially sensitive, and reasonable pressure fails to produce any effect. Dr. Hayes makes two points: 1st, care in running a portion of the fluid before free incision as a guide to the degree of tolerance, and 2d, careful maintenance of such a position in the patient during and for some time after the operation, as will best favor the retention by gravitation of the largest amount possible of the cerebro-spinal fluid.

ANGULAR ANCHYLOSIS OF FEMUR AT THE HIP JOINT, TREATED BY SUBCUTANEOUS DIVISION OF THE SHAFT AT THE TROCHANTER.—Dr. Stephen Smith gives a full and very interesting report with illustrations, in the *Medical Record*, of successful treatment of this affection. He used the fenestrated canula saw of Dr. Geo. F. Shrady, which consists of a trocar, fenestrated canula, and a staff with handle and blunt extremity. A portion of this staff at a short distance from the extremity is flattened, one edge being made into a knife-blade, and the other edge being provided with saw-teeth. The staff replaces the trocar, and then the saw or knife can be worked to and fro within the canula, or fixed as one piece by a thread-screw. The soft parts are protected from injury no matter in which way the instrument may be worked—the saw and knife being guarded on all sides except on the limited cutting edge. In this case a division was made at the small trochanter, and as non-union was liable to occur from displacement, a half tenon and mortise was cut, causing the fragments to lock. The operation was successful, but while adjusting the plaster-of-Paris dressing, the lower fragment of the femur slipped twice out of its interlocked position, but was replaced and remained satisfactorily. About a week after the operation, an abscess formed, which was superficial, and extended nearly to the knee, but soon closed. The patient now walks without any support, erect as she would with a healthy limb, and with but a slight halt.

MODERN CIRCUMCISION.—The official circular of instructions, Jan. 10, 1883, says the *Med. Press and Circular*, issued to the Israelitish communities of

Baden, sets forth that the only persons who are to be permitted for the future to perform the rite of circumcision, shall be such as shall be authorized by the Jewish Supreme Council. 1. The knife must he freshly polished and the forceps properly purified. 8. The quadrangular pillow employed, as well as the sausage-shaped ring, must be frequently renewed, and before every circumcision, covered with new gutta-percha tissue or new sarsanet. 7. The operator, immediately before the operation, must carefully wash his hands with soap, and cleanse the nails with a good hair brush, taking peculiar care that no dirt be allowed to remain under the nails, more especially under those of the thumbs. The hands must in addition be washed in a 5 per cent. solution of carbolic acid. The operator is no longer to suck the wound, nor irrigate it with wine ejected out of the mouth. Instead of this the blood is to be removed by gently wiping the wound with pledgets of purified boracic lint dipped in wine. The wound is to be closed by being enveloped in a strip of 10 per cent. boracic lint. The further removal of fluids and blood clots is only to be effected by means of a new sponge previously soaked in a 5 per cent. carbolized solution or by salicylized lint. A medical man must be immediately called in if hæmorrhage be considerable, and cannot be at once stopped, or if it be from an artery. Such authorized persons are forbidden to perform the rite, if suffering from any infectious disease, and until complete recovery has taken place.

A DOCTOR'S MODEL HOUSE.—Really, our English cousins are becoming too much of a puzzle to us. Here we have just established the fashion, which has become wide-spread, of houses with open fire-places and windows that are easy of access and have facilities for the free entrance of frésh air, in accordance with English prejudices. And now we find the *Lancet*, under the above heading, congratulating Dr. Hogg, of Bedford Park, Chiswick, on his successful attempt to solve the vexed question of house-heating and ventilating, by building a house in the Queen Anne style, where no window can open, and where there is no fire-place except in the kitchen.

He has placed a large passage under his hall for an air-chamber that can be cooled in summer and heated by steam-pipes in winter. This air then penetrates throughout the house by apertures in the skirtings and cornices. In the roof of the house is a foul air chamber with which each room connects by exhaust shafts. The kitchen fire is utilized to produce exhaust suction in a large shaft running from the foul air chamber to the back of the fire, and travels again up and out by the chimney. It is calculated that the atmosphere is entirely changed throughout the dwelling in twenty minutes without the slightest draught. The even temperature throughout is an argument in favor of health, the absence of dust from fires and the small cost of heating is an argument in favor of economy and housekeeping.

ICTHZOL is obtained from a bituminous mineral at Seefeld, in Tyrol, which is subjected to dry distillation in iron retorts, resulting in the production of a tarry-like substance of a peculiarly disagreeable odor; from this, after long standing, a thin fluid oil is separated. After thorough purification, it is treated with concentrated sulphuric acid. The superfluous sulphuric and sulphurous acids have then to be separated from the sulphate which is formed. It has the consistency of vaseline—partly soluble in ether and partly in alcohol—totally in a mixture of the two. Forms an emulsion with water, and may be mixed in any proportion with vaseline and fat. The mineral from which it is derived contains in its matrix a great number of fossil imprints of fishes, and the bitumen is regarded as the animal remains of these —hence the name.

It has been employed with good results in eczema, and Prof. Unna, of Hamburg, speaking of its use in acute and chronic rheumatic arthritis, says: "I believe from my few cases I may say that, up to the present time, there is no external application of equal efficiency." It has not been found useful in simple neuralgias. If added to a large quantity of water and heated, the icthzol is decomposed, giving off H_2SO_3. S &c. Employed by way of inhalation in this manner, Herr Unna has observed remarkable results in affections of the respiratory tract.—*Med. Press and Circular.*

SUBCUTANEOUS INJECTIONS OF ETHER.—Dr. Moizard in the *Jour. de Med. et de Chi.*, calls attention to the care that must be taken in selecting a proper site for these injections. When used upon the forearm paralysis has ensued, especially of the extensor communis digitorum, in one case lasting about a month. These injections have become useful in adynamia from various causes to sustain the enfeebled forces, and the local inflammation produced can be generally prevented by inserting the needle deeply into the subcutaneous cellular tissue, and a selection by preference should always be made where this tissue is the thickest, as over the superior and external parts of the thigh.

The amount usually employed is from 0.28 to 0.30 centigr., and can be repeated frequently, as it is very rapidly eliminated, which is well shown by the characteristic odor of the patient's breath, a few moments after its use. It is quite as useful in children as in adults, and is a remarkable adjuvant to the use of alcohol.

THE LIGATURE TIGHTENER.—Mr. John Clay, *Lancet*, June 9, 1883.—This instrument is devised for application to a stricture so situated that the fingers cannot be efficiently used to tighten the ligature; or of being applied to a morbid growth, the size of which requires greater constrictive power than can be produced with the fingers alone. The ends of the ligature are fastened to the stem of the instrument, which is then worked as an ordinary wire-rope écraseur.

ELECTION OF PROF. RICHET TO THE FRENCH ACADEMY OF SCIENCES.—The French medical press is congratulating the profession on the election of Prof. Richet to the Academy of Sciences in the place of Ledillot in the Section of Medicine and

Surgery. It seems that Brown-Sequard was his principal competitor, and the election of Richet silences two objections which were urged, viz: that neither medicine or surgery can be classed among the sciences, and that the physician exercises a lucrative profession, and is not a disinterested high priest of science. In the light of development and evolution our catalogue of the fixed sciences has become very small, and happily other professions, such as that of the engineer, the chemist, etc., have been lucrative in themselves.

NEW JOURNALS.

THE *American Pscychological Journal* is issued quarterly by the National Association for the Protection of the Insane and the Prevention of Insanity. Joseph Parish, M.D,. of Burlington, New Jersey, is the editor.

THE ELECTRIC LIGHT FOR MICROSCOPIC WORK.—Dr. Henri Van Heurck, in the *Journal de Micrographie* for May, 1883, gives a very interesting account of the utilization of the electric light for illuminating the microscope and for use in microphotographing. In illuminating the field, the delicate striæ of the amphipleura and the nineteenth group of Nobert's test were defined with perfect distinctness. Professor Abbe explains this as due, 1st, to the great whiteness of the light; by the mensurations made by Prof. Abbe in different monochromatic illuminators, it has been demonstrated that the separating power of an objective of a given aperture increases in the same proportion that the wave length of the light employed dimishes; it results, therefore, that the electric light will show delicate details more readily than the yellow light of gas or of lamps. 2d. The specific intensity of the electric light being much greater than that of other artificial lights, a sufficient illumination is obtained by a pencil of light that is much smaller than can be obtained by any other means.

These minute electric lamps can be attached to the microscope in three ways: 1, attached above the objective by a collar which permits rotation upon an articulated arm for illuminating opaque objects; 2, placed on the substage so as to be pushed laterally, when required, and give oblique illuminations; 3, with greater illuminating power and attached to an articulating arm in place of the mirror, to be used in polarization and photomicrography. The microscope is placed upon a metal plate, and is provided with a lobinet which diminishes or increases the force of the electric current, and a commutator in three directions allows the current to pass at will to any one of the three lamps.

NEW DRUGS.

KAIRINE.—This comes to us from Vienna, where last year attempts were made to find a substitute for quinine, resulting in the synthetic manufacture of chinoline out of aniline, nitro-benzol, glycerine and sulphuric acid, which had anti-febrile properties. Other experiments gave us from chinoline a preparation technically called methoxychinolinetetrahydride, to which the name of kairine has been given. It is an oil that unites with hydrochloric acid. One striking effect is shown in coloring the urine of the person taking it brown or olive green, and more rarely grass-green. The urine usually contained bacteria in considerable quantity. Prof. Ludwig gave this account at a recent meeting of the Royal Medical Society of Vienna, and Prof. Drasche gave his experience with it. In doses of ½ grain every two hours up to three grains in the twenty-four, a considerable fall of temperature took place, accompanied by shivering and grave symptoms of collapse. He afterwards gave it in 0.2 grain doses until 2 grains had been given in twenty-four hours. The dose of 0.3 grains caused a fall of 5.° 8½ F. in a case of pneumonia, and in another a dose of 0.2 grains reduced the temperature 7.° 8 F. Doses of 0.3 grain in a severe case of typhoid fever gave rise to rigors, collapse, and feebleness of cardiac action. He considers that kairine is superior to all other drugs as a promptly-acting anti-pyretic, and that it has a great future before it.—*Medical Press and Circular.*

NEW INVENTIONS.

AN AUTOMATIC TONGUE-DEPRESSOR..—Dr. Alexander Ferguson gives a wood-cut and description of this instrument in the *British Medical Journal*, which, without the cut, may be described as a blade which applies to the tongue, and is so constructed on a sliding principle, as to suit it to any size of tongue—that is, it can be lengthened or shortened at will. The tongue-plate is provided by an arm at right angles to it, when open, which has a ratchet fitting into a tube attached to a chin plate and caught there by a tooth. The chin plate is horseshoe in shape and lined with morocco leather, being so constructed as to comfortably adapt itself to the long ridges of the lower jaw. The inventor condemns the chin-pad of ordinary tongue-depressors, as, by being applied to the soft parts, they serve to press the tongue upwards. Both blades are jointed, and closing, make the instrument so compact as to be carried in the vest pocket.

EDITORIAL.

ADVERTISEMENTS.—Under the head of correspondence will be found a brief letter from Dr. G.R. Henry, of Burlington, Iowa, making vigorous protest against the insertion of advertisements in the advertising columns of the JOURNAL concerning "ready made prescriptions," etc. If our correspondent had examined more carefully the advertisement of Parke, Davis & Co., on our last page, he would have seen that it contained no reference to *prescriptions* of any kind. While the well-known firm to which our correspondent refers, has yielded to the pernicious practice,at present almost universal among drug manufacturers, of putting up and selling "ready-made prescriptions" or formulæ, they are entitled to the credit of abstaining from the still more objectionable practice of resorting to *trade-mark*, *copyright*, or other means of holding exclusive proprietorship in

medicines of any kind. The rule adopted by the Board of Trustees, and sanctioned by the National Association, concerning advertisements in this JOURNAL is as follows: "Advertisements may be admitted from medical educational institutions and hospitals open for clinical instruction, from book publishers, pharmaceutists, instrument makers, and all other legitimate business interests. But all advertisements of *proprietory*, *trade-mark*, *copyrighted*, or *patented* medicines, should be excluded. Neither should any advertisement be admitted with one or more names of members of the profession as endorsers, having their *official titles* or *positions* attached."

If we violate this rule, it will be by mistake or inadvertence.

EPIDEMIC CHOLERA.—For two or three years the prevalence of this disease has been steadily increasing in India, and during the present season is prevailing, in a severe form, in Egypt.

This event has created no little alarm in the countries of Western Europe, and their governments are taking active quarantine and other sanitary precautions for preventing its introduction into their respective countries. It is probable that the value or efficacy of such measures in preventing the spread of this pestilence from one country to another will receive a fairer test than ever before.

The popular doctrine, both in and out of the profession, is that the disease is caused by some species of organic germ, capable of being transported in various ways from one place to another, more especially along the lines of travel and commerce. There are many facts, however, connected with the history of past epidemics of the disease, that are not readily explainable upon such a theory. And it is not quite certain that special meteorological conditions, existing coincidentally with bad local sanitary states, have not more influence over the question of its prevalence, either in Western Europe or in our own country, than that of the importation of its supposed cause. If its increase in India and present prevalence in Egypt is really the beginning of one of those wide-spreading epidemics, such as occurred from 1848 to 1854, it will not be likely to reach Western Europe until late the present season, or early the next summer, and this country the summer following. But in neither this nor any other civilized country can the governmental authorities give too great an amount of attention to the removal of every source of local contamination of air, water, and soil.

NEW SUBSCRIBERS.—To save answering the same question many times, it is proper to state that a sufficient number of extra copies of this journal have been printed to supply all new subscribers, or additional members who may desire it, with the numbers from the beginning, and we shall be careful to keep enough of each issue on hand to furnish complete files for, at least, six months to come.

DISCUSSIONS BEFORE THE SECTIONS.—In answer to several inquiries, it is proper to state, that no reports of the remarks made by members in discussing the papers read in the several Sections of the Association, have been made in the majority of instances.

In such, of course, none can be published in connection with the publication of the papers. In other instances, however, reports of the remarks made have been preserved and revised by the speakers. In all such cases we shall endeavor to have the reported comments appear with the papers to which they relate.

CORRESPONDENCE.

CHICAGO LETTER.

[For THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

Chicago, it seems, is about to be blest with several new hospitals. The one most recently mentioned has been started by several Presbyterian gentlemen. At present there is but one Protestant general hospital in the city. St. Luke's, which is under the care of the Episcopalians. A charter has been obtained for the Presbyterian Hospital by Tuthill King, Daniel K. Pearsons, William Blair, Robert C. Hamill, John H. Barrows, C. M. Henderson, John B. Drake, Nathan Corwith, Samuel M. Moore, Henry M. Lyman, James M. Horton, Willis G. Craig, Cyrus H. McCormick, Jacob Beidler and J. P. Ross. The hospital is promised at no distant day, as many of our wealthy citizens insure its financial success. It will not be denominational further than being under Presbyterian management.

Rush Medical College is about to build a hospital of its own on ground in close proximity to the college buildings. The hospital will be built so that it can be enlarged in the future. The college is undoubtedly led to make this move because of the many hinderances thrown in the way of clinical teaching in the County Hospital, by the County Commissioners. During the last two years or more, the students have not been allowed to enter the wards, and go to the bedside for instruction, but have been required to receive all clinical instruction in the amphitheater. More recently the Board of Medical Attendants were all discharged, and on the new Board only one member of the faculty of each of the colleges was appointed.

The New St. Luke's Hospital is fast nearing completion, and will be ready for occupancy in the course of a few months. This hospital has long needed enlargement. Its wards are always full to overflowing. The new building is expected to be one of the best planned hospitals in the country. They still have as much more ground as is now used, on which they can build in the future. This hospital will furnish much additional clinical material for the students of the Chicago Medical College. The hospital is only a few blocks from the college, and three of its staff are professors in that institution. They have been giving several clinics each week during the last year, in the old hospital. The Chicago Medical College is now peculiarly well supplied with clinical material, for in addition to St. Luke's Hospital, it still has the

use of the material in Mercy Hospital, which is situated on the same grounds with the college. Mercy Hospital accomodates between two and three hundred patients. Some four or five blocks off there is also the Michael Reese Hospital, in which occasional private clinics are held.

Our summer hospital, the floating hospital for babies, has entered on its annual era of usefulness. No charity is more worthy of commendation; by means of it the poor suffering children and their mothers, from our closely packed, poorly ventilated and drained tenement houses, are given a breath of pure fresh lake air. For a number of years this institution has done much for the poor children of our city. We are glad to say that an additional institution of the same character has just been opened upon the lake front, in the South division of the city. A breakwater running along the shore at the foot of 25th street has been covered by an awning, and a house has been built at one end for the storage of such articles as are necessary for the hospital, cots and swings are furnished for the comfort and accommodation of the little ones. Nurses and physicians are on hand each day from 6 A.M to 8 P.M.

The recently issued announcement of the Chicago Medical College contains the outline of a four year course which this faculty recommends. For many years they have offered only a graded three year's course. The need of an additional year is felt by all conscientious students, and this last provision will be welcomed by them. An honor has been conferred upon one of the best known and most respected members of the faculty of this college of which all his friends rejoice to learn. The North-Western University at its commencement in June, conferred upon Dr. Hosmer A. Johnson, the degree of Doctor of Laws.

Through the munificence of some of its friends, the Northwestern University has been cleared of all indebtedness, leaving the institution to enjoy the full benefit of the income from its magnificent property, which now amounts to over a million dollars. In 1881, Dr. John Evans, formerly a citizen of Chicago, but during recent years a resident of Denver, Colorado, offered the university, in addition to magnificent endowments that he had given it in its early history, $25,000 if they would raise $75,000 more before the university commencement of 1882, and also $25,000 towards a second $100,000 to be raised before the same time in 1883. The $200,000 thus to be raised would clear the institution of debt. Many friends of the institution united to raise the required amount. Mr. William Deering, however, by his great generosity contributed a considerable portion of it, giving $25,000 towards the first hundred and $50,000 towards the second hundred thousand.

The recent lard investigation in Chicago has attracted considerable interest on the part of the medical profession of the city, as several of its members were called upon for expert testimony. Just before Mr. Peter McGeoch's recent failure he refused to accept of Messrs. Fowler Brothers 500,000 tierces of lard, alleging that they were not pure as they should be, but were adulterated with cotton-seed oil and tallow. The Chicago Board of Trade undertook an investigation of the matter. Professor Walter S. Haines, Dr. I. N. Danforth, Dr. W. T. Belfield, Dr. R. Tilley and Dr. P. S. Hays were variously employed as experts. In the course of his investigations Dr. Belfield found that by allowing the fats to crystallize out of an etherial solution, lard and tallow could be readily distinguished from one another. The former produce plate-like crystals, rhomboidal in shape and bevelled at the ends; the latter are plume-like and curved as the italic *f*. Among the many experts called in the case by both sides were Professors Remsen, Doremus, Witthaus, Sharpless and Habersham. For the present the investigation is closed, but will be reopened in August, when it is understood further expert testimony will be procured.

The State Microscopical Society is making preparations to receive the members of the American Society of Microscopists who meet here in August. A large meeting is expected, as many, undoubtedly, who intend to attend the meeting of the American Association for the Advancement of Sciences, which convenes a little later in St. Paul, will start early enough to attend the Society of Microscopists here. A reception will be tendered the society at the Calumet Club on August 9. A fine display of microscopical objects, it is hoped, will add to the interest and entertainment of the evening.

In this letter I shall not have an opportunity to speak of the work being done by our medical and other scientific societies, although meetings of interest are still being regularly held by them.

BOSTON LETTER.

[For The Journal of the American Medical Association.]

With the annual meeting of the Massachusetts Medical Society, which usually occurs early in the month of June, each year, all the active society work in medical matters in Boston may be said to end. That event is the grand culmination of the season, and at its close the profession draws a long breath and prepares to enjoy a few weeks of relaxation from the really arduous duties of the previous nine months. With each summer a constantly increasing number of physicians adopt the vacation system, now so generally indulged by the rest of suffering, sweltering humanity, and the doctor is already beginning to look forward to the time when he may close his town residence entirely and spend an uninterrupted holiday of two or three months in some accessible suburban resort, instead of being restricted to occasional outings of two or three days, or at most a fornight, as is now generally the case. Our city is most fortunate in possessing a great number of picturesque and interesting localities in its immediate vicinity, and the many railways and other means of communication render it quite easy to reach almost any desirable point within a radius of fifty miles, at very moderate expense of time and money. A very considerable proportion of our winter population is to be found permanently domiciled in these country retreats during the heated term, and in many places the "summer residences" of our city people out-

number by far the houses of the original inhabitants of the town. With each year there is a steady increase in the number of these rural abodes, until in some places they seem like small cities by themselves. It has already come to pass that much of the winter society in Boston is so conveniently disposed at the various "shores" and "hills" that the feeling of strangeness is never known, as old friends and neighbors are always within an easy drive, or possibly reside within sight from the window. Several physicians are so fortunately situated as to be able to fly away with their friends, and spend the entire season in these delightful surroundings, thus obtaining much needed recreation, and giving to their winter patrons the feeling of security which their presence affords, in localities where good physicians are not always easily accessible, and where the need of their services may at any time become speedily urgent.

During the present week the chemical department of Harvard Medieal College is being transferred to its quarters in the newly-erected building, to which it was hoped and expected that the entire collegiate functions would ere this time have been transposed. A most unfortunate conflagration, which occurred early in June, in the main wing of the structure just as it was being finished, wrought such extensive damage both to the inside and out of the edifice, that it now seems highly probable that many of the laboratories and special departments will unavoidably be retained in the inconvenient and unsightly old building where they have for some years struggled and languished. It has for some time been an ardent hope among the friends of the college that a new building, and modern conveniences for work, would supply the necessary stimulus to enable the college to make necessary and radical changes in many ways, and to raise itself in its medical department to the position which its importence as a great university, its position as the leading New England educational institution, imperatively demands. Whether these changes will follow the magnificent gift of a noble building we cannot know for one year longer, but if the prolonged delay is at length followed by results so desirable no one will murmur.

Apropos, it is interesting to observe how a finished "fire-proof" building may be so completely ruined by a conflagration originating in one portion that months of labor are required to render any portion of the structure habitable. The question of fire-proof construction would really seem still as far from a positive solution as that of ventilation, or acoustic qualities in architecture, or of antisepsis in surgery. To this last, however, it still offers much similarity, in that its accidents are best treated by the "spray."

From our safe hermitage in Boston, where we sit down and rise up in safety, surrounded and defended by filth and off-scourings of every State around us, by quacks belonging to our own members, and by every sort of medical pretenders, with diplomas or without, who have been driven from the peaceful pursuit of their nefarious occupation in other places, and have come to Massachusetts, where they find a charitable reception and a secure asylum for the further prosecution of their peculiar practices, we cast our eyes complacently acrosss the border to our sister city of New York, and behold with equanimity the struggle there being enacted in regard to the Code question. Fortunately, no such cloud looms in our own professional horizon, no such agitation disturbs the apathetic sluggishness of our medical repose; in the words of the Queen's speech "our relations with all surrounding powers continue to be amicable."

When we reflect that these include all the men, women and things in any way connected with the so-called "practice of medicine," and that eclectics, clairovyants, mediums, seers, bone setters, abortionists and the rest are gathered into one happy family and nurtured under one and the same provision of law, in the providence of the Commonwealth of Massachusetts, it becomes at once evident that this State and this city are the nearest approximation to elysium yet demonstrated to a waiting and expectant race.

The recent closing of the *case celebre*, the "Tewksbury Investigation," has afforded a sensation of relief to a weary people who had begun to think the end was as far away as a verdict in chancery. Of all the State business ever transacted within the commonwealth, it is doubtful if any one action ever interested and concerned every calling, profession, trade, or occupation, and all ages, sexes, relations and previous conditions of servitude to the extent which this notorious exposé has done. The result has not been yet publicly announced, but two reports have been presented, a minority and a majority report. The latter is an able and vigorous document, and treats the entire subject in the most clear and candid manner. It directly accuses the Governor, Gen. B. F. Butler, of making charges against the institution which have no foundation in fact, and spares no words in denunciation of the manner in which the chief executive magistrate of the State has conducted the case as prosecuting officer. It is doubtful if any incumbent of the gubernatorial chair has ever received such a castigation at the hands of a legislative committee, and it is sincerely to be hoped that no one has ever been proved so worthy of censure. The report is very long, and recites every grievance mentioned by the prosecution, most of which do not directly interest the medical profession, but its closing paragraphs are so concise, so clear, and so comprehensive in relation to the general sanitary and hygienic condition of the State Almshouse, that every physician must feel an interest in its perusal.

The treatment accorded by his Excellency to the professors and teachers of Harvard University has also been deemed worthy of rebuke. What, if any result follows this scandalous investigation is still a matter of conjecture, but the moral atmosphere and the daily press have already become somewhat purer since the testimony in the case was concluded, Appended is a verbatim copy of the final clauses of this admirable report, as it was presented to the legislature by the joint committee from the two houses:

"We have visited Tewksbury—many of us several times—and examined the institution in all its parts. We have seen and tasted the food of its inmates, and had before us the men who cooked it and served it

for many years. We have had before us one of the late trustees, the superintendent, the clerk, the physician, matrons, the nurses and attendants. We have examined the official reports of the State Board of health, lunacy and charity., which by agreement are made part of the case. Further, we have had before us Fr. Gigault, of Lowell, the Catholic priest, whose presence is such a benediction at the almshouse; also the official report of Mrs. Clara T. Leonard, one of the efficient members of the State Board; also Dr. George A. Tucker, the eminent expert from Australia, and Dr. Charles F. Folsom. And, after hearing all the evidence in the protracted hearing, we declare the present condition of the State Almshouse at Tewksbury to be good, and with one single exception,

ENTIRELY WORTHY THE STATE.

That one exception is that the appropriations have been too small. The evidence is cumulative that there should be more and better attendants and better food for the sick and infirm, more amusements and recreation for the hopeless insane, and other things as recommended by Mrs. Leonard in her official report:

We pronounce the main charges of His Excellency the Governor groundless and cruel. The question of infant mortality was an old one, well settled, as everybody knew. The delivery of dead bodies under the law was under the control of the trustees and superintendent, and any irregularity should have been remedied by them without publicity, if proof thereof had been furnished, and the people of this proud commonwealth would have been saved from the shame and humiliation so recklessly and needlessly brought upon them. Surely the truth should have been ascertained before making such awful charges.

Our order was to investigate the other institutions, but we have heard no cause of complaint, and have had no time to devote to them. We made the ordinary tour of inspection, and found them in good condition.

We commend to the Legislature and to the people all our public charitable institutions as still worthy this ancient commonwealth, although, in the language of one of his Excellency's distinguished predecessors, they are constantly requiring changes to meet the recurring exigencies and the demands of a progressive philanthropy.

Your committee desires to place upon the record their strong disapprobation of some things said and done by the Governor during the course of this hearing. We pass by the insults to the committee and to the chairman who presided at this hearing by invitation of the regular chairman, with consent of the committee; also the reference in the argument to "clearing out this State House" by his veteran comrades; and consider graver things. His excellency announced, on the first evening of the hearing, that he had not come into the case

WITH A BLACKING BRUSH.

But when, in cross-examination of a young lady witness [p. 1839], in order to ascertain whether, in a certain campaign, a distinguished citizen of this State tarried over night at the State almshouse, he said: "I don't know what you knew by sleeping with him"; when he spoke of a matron who had been a witness as "that little chit, who could do no good among old men except to excite their passions"; when he insinuated that the father of Charlotte Anderson's child was the aged superintendent of the almshouse; when he tried in vain to make Thomas Kelliher, one of his witnesses, admit that he took money and suffered imprisonment for being the father of a bastard child on solicitation of the assistant superintendent; when he suggested that another respectable lady witness employed at Tewksbury belonged to "the harem"; when he spoke of the State almshouse as a "hell upon earth," and the home for discharged females at Dedham as a "den"; when he spoke of the eminent physicians who controverted Dixwell's testimony as the "refuse" and again as the "empytings" of Harvard medical school, and again as "rascals" and "runts," your committee thought the blacking brush had been brought into requisition. When he, in his argument, related his own disgusting description of the operation of craniotomy; when he brandished what he called a woman's skin and pointed to the audience the nipple of the woman; when to defend the New York witness, Eva Bowen, he averred that, under God, her seduction and fall are due to the school system of Massachusetts; when we see him flourish a piece of human skin which had not been put into the case, with an alleged crucifix tattooed upon it; when he alluded to old and young men whose jaded passions are to be excited by wearing slippers made from a woman's breast, your committee blushed for the commonwealth, and turned away in amazement. But worse than these was his portentous reference to the French revolution. Can it be possible that the people of this commonwealth are slumbering upon such a volcano as burst upon the people of France in 1789, whose fires are to be kindled because four reckless medical students have caused to be tanned for their own purposes a few pieces of human skin? Is this what his Excellency means when he says we must see that the wheel don't go round once again?

We have examined the 3,000 proofs of the testimony in this case with solicitude to be just, just to the management of the Tewsbury almshouse, just to His Excellency the Governor, who made the charges and conducted the prosecution, and, above all, just to the commonwealth whose servants we are.

ONSLOW GILMORE,
EDWARD P. LORING,
Senate.
GEORGE E. LEARNARD,
ROGER WOLCOTT,
GEORGE D. CHAMBERLAIN,
WILLIAM E. CHESTER,
LYMAN K. PUTNEY,
House.

BURLINGTON, IOWA, July 23, 1883.

Dear Doctor.—I have received your first number, and am delighted with it as a journal; but I am not so pleased with your advertisements. Parke, Davis & Co. have bored the physicians of the Northwest sufficiently with their ready-made prescriptions. In

fact, they have taken the place of Ayer's Pectoral and Humbold's Buchu, and are patronized by all the quacks and all the patent medicine men in this country. Soon I presume you will advertise Warner's safe cure for kidney trouble. Now, I protest right here against the organ of the American Medical Association being the means of disseminating any such advertisements. I ask a place for this in your correspondent's column, and see if I am not indorsed by nine-tenths of the physicians in the land.

Yours truly, G. R. HENRY, M.D.

CHOLERA.

BY H. RAYMOND ROGERS, M.D., DUNKIRK, N. Y.

Words of warning come from the East, of the approach of cholera in its worst form. To the medical profession, therefore, to be forewarned should be to be forearmed. The duty of the hour is to look well to our conceptions of the disease—its cause, its pathology and its treatment. We have to-day only the experience of the past to guide us. This, confessedly, is not assuring; since all theories and all forms of treatment have been fruitful only of disastrous results. In fact, no treatment at all has given nearly as good results as the most scientific treatment. The average mortality has ever been 50 per cent. of the persons attacked.

Under these circumstances only one course is open to us, *i. e.*, to boldly discard all old theories, and every system of practice, and improve the opportunity to study each case with earnestness, to the end that we may find a philosophy that will take into account all its phenomena, and constitute an exact science of the disease. Briefly, the demand is for a new foundation.

In response to this imperative demand I submit a theory of the disease which, in practice, has afforded good results, viz: 1. That cholera is a true neurosis; 2. that it consists essentially in a disturbance of the general innervation; 3. that its leading symptom is a true hæmorrhage; 4. that its source is to be sought for in meteorological conditions.

That it is a true neurosis is abundantly demonstrated. The fact that a person in full health and strength may be attacked and die in the space of twenty or thirty minutes, effectually disposes of every theory of poison, and shows conclusively that in these rapidly fatal cases the force of the disease is expended upon the brain and nervous system. No evidence of the action, or existence of poison, has yet been discovered, even after many thousands of autopsies conducted with the most rigorous exactness.

The initial sense of malaise, the regurgitative vomiting, the cramps, and the unlocking of the walls of the blood-vessels, permitting the escape of the serum into the stomach and bowels,—these all indicate a disturbed innervation.

That the leading symptom—the rice-water discharges—is a true hæmorrhage is, demonstrated by the fact that these are constituted of the serous element of the blood. The rapid escape of a single element of the blood is disastrous in the same manner as the escape of the full blood itself in abortion and other forms of active hæmorrhage.

To discuss its source and mode of dissemination now, would not be wise or profitable, as this can be done more intelligently after an epidemic. We know that this disease laughs at a *cordon sanitaire*, or quarantine.

The characteristic symptoms, and the pathological conditions, unerringly determine the mode of treatment. If we would look upon cholera-hæmorrhage as subject to the same general principles of treatment as other hæmorrhages are, the question of treatment would become a simple one.

The horizontal position, or with the body more or less inclined, with the head downward—according to the gravity of the case—and persistently continued until convalescence is assured, is the sheet-anchor in the treatment of this diseuse.

When we consider that the physiological action of the mucous membrane is reversed in this disease,—that exosmosis takes the place of endosmosis, the futility of relying upon remedies internally administered becomes apparent. The medication *par excellence*, is morphia hypodermically applied, or sprinkled upon a blistered surface. This remedy changes the perturbed condition of the nervous system, and effectually, and quickly, closes up the diminutive avenues through which the life current ebbs away. For the mouth, but little is required save pounded ice, or cool water, frequently repeated.

Much can be done in staying the progress of this scourge, when epidemic, by informing the public through the columns of the press as to what should be done *immediately*, when diarrhœa sets in, viz: that a mild opiate should be taken, and more or less frequently repeated, and the horizontal position maintained for a number of hours. This course would prevent a fatal termination in a majority of the attacks.

The larger proportion of the cases which occur during an epidemic are due *alone* to the effects of fear, and a knowledge of the fact that these simple precautions will rob the disease of half its dangers, will go far to remove such fear, and thus secure a degree of exemption from its ravages.[1]

[1] This subject is more fully treated by the writer in the Transactions of the American Medical Association for 1876.

REVIEWS.

THE RELATION OF MICRO-ORGANISMS TO DISEASE. By WM. T. BELFIELD, M.D., Chicago. W. T. Keener, 1883.

Such wide publicity has already been given to this admirable work of Dr. Belfield throughout both the professional and non-professional press, that it is almost needless to remark it is a reprint of the Cartwright lectures, recently delivered by him in New York, before the Alumni Association of the College of Physicians and Surgeons. That he fully appreciated the compliment bestowed upon him by the invitation to deliver these lectures, is plainly evinced by the amount of care which he has taken in their

preparation, for they bear the imprint of most diligent research. The value of his publication is greatly enhanced by the addition of numerous excellent cuts of the various forms of bacteria, copied for the most part from photograms by Koch.

The scope of the work may be estimated by reference to the classification which the author has made of the evidence upon which the germ theory rests. He discusses first the evidence with regard to anthrax, whose bacterial origin has been affirmed by inoculation experiments in the hands of several competent observers. Second, the testimony regarding tuberculosis, which has been adduced by one competent observer. Third, those diseases which are characterized by the presence of bacteria in the tissues, but which have not been induced by inoculation with isolated bacteria. Fourth, those diseases, after death from which bacteria have been discovered in the tissues, and fifth, those diseases in which the presence of bacteria has been asserted.

The entire subject is treated from the standpoint of one who has closely followed the development of an intricate problem, and has endeavored to deduce therefrom the logical results, and thus accurately define the present status of an important question.

BOOKS AND EXCHANGES RECEIVED.

The *Cincinnati Lancet and Clinic*, June 30 and July 21, 1883.

The *Sanitarian*, New York, July 19, 1883.

Transactions of the Medical Society of the State of West Virginia, Sixteenth Annual Session, 1883.

How to Conduct Inquests and Post-Mortems, and how to Give Official and Expert Testimony before Courts of Law in Cases of Homicide. By C. H. Von Klein, M.D., Hamilton, Ohio.

MEDICAL SOCIETY ITEMS.

MEETINGS OF SOCIETIES, ETC.

The British Medical Association holds its fifty-first annual meeting at Liverpool, England, on July 31 to August 4, and the three main physical requirements which the editor of the *British Medical Journal* sets forth as necessary for a place of meeting, commend themselves with full force to the American Medical Association. They are (1) facilities of success, (2) ample hotel and other accommodation, and (3) local attractions. The work in the sections has been arranged for the most part at least seven weeks before the meeting, and is full and comprehensive, and among the entertainments for relaxation is the annual banquet, which is conducted through subscriptions by the members. The Association has thirty branches, with a membership of 7,416.

The Medical Society of Virginia will hold its Fourteenth Annual Session at Rockbridge, Alum Springs, Va., September 4, 5 and 6. It is expected to be a session of more than ordinary interest. Several visitors from other States are expected to be in attendance who have promised papers. Dr. Wm. D. Cooper, of Morrisville, Va., is President; Dr. Hugh M. Taylor, of Richmond, Va., Corresponding Secretary and Dr. Landon B. Edwards, of Richmond, Va., Recording Secretary, to either of whom letters of inquiry or communications intended for the society may be sent.

SOCIETY NOTICES.

The sixteenth annual session of the American Ophthalmological and Otological Association was held at Hotel Katerskill, Catskill Mountains, July 18.

An Iowa State Veterinary Society was organized at Burlington, July 17.

The thirteenth annual meeting of the Wisconsin Dental Society began July 17, at Milwaukee.

MISCELLANEOUS.

RECENT LAW TO REGULATE MEDICAL MATTERS IN MICHIGAN.

ACT NO. 167, LAWS OF 1883.

An Act to Promote Public Health.

SECTION 1. *The People of the State of Michigan enact*, That from and after this act shall take effect, it shall not be lawful for any person to practice medicine or surgery, or any branch thereof (except dentistry) in this State, without having the qualifications required in the provisions of this act, and without having first registered in the office of the county clerk as provided in this act.

SEC. 2. The necessary qualifications to practice medicine in this State shall be:

First, That every person who shall have actually practiced medicine continuously for at least five years in this State, and who is so practicing when this act shall take effect, shall be deemed qualified to practice medicine in this State, after having registered in the office of the county clerk as provided by this act.

Second, Every graduate of any legally authorized medical college in this State, or in any one of the United States, or any other country, shall be deemed qualified to practice medicine and surgery in all its departments, after having registered as provided in this act. *Provided*, That the provisions of this act shall not be construed so as to prohibit any student or under graduate from practicing with and under the instruction of any person legally qualified to practice medicine and surgery under and by the provisions of this act. *Provided*, That every person qualified to practice medicine and surgery under the provisions of this act, shall, within three months after this act shall take effect, file with the county clerk of the county wherein he has been engaged in practice or in which he intends to practice, a statement sworn to before any officer authorized to administer oaths in said

county, setting forth, first, (if he is actually engaged in practice in said county), the length of time he has been engaged in such continuous practice, and if a graduate of any medical college, the name of the same and where located, when he graduated, and the length of time he attended the same. also the school of medicine to which he belongs. And if he is a student or under graduate, the length of time he has been engaged in the study of medicine, and where, and if he has attended a medical college, the name of the same, and where located, and the length of time so attended and when, also the name and residence of the physician under whose instruction he is practicing or intends to practice. It shall be the duty of the county clerk of each county in this State to record in a book provided by the county, the affidavit (or sworn statement) of every physician practicing in said county. For recording each statement the county clerk shall receive fifty cents, to be paid by the person filing the same.

SEC. 3. It shall be the duty of the supervisor, at the time of making the annual assessment in each year, to make out a list of all the physicians and each student practicing under the instructions of a preceptor residing within his township, village, ward or city, with the name, age, sex, and color of each, and the length of time each has been engaged in practice, and if a graduate of a regularly established and reputable college, the name of the college and the date of graduation. Such list shall be returned by the supervisor to the township, village or city clerk, and by the clerk recorded in the book in which are kept the records of the local board of health.

SEC. 4. No person who practices medicine, surgery, or midwifery in any of their branches (except dentistry), shall be able in any of the courts of this State to collect pay for professional services rendered subsequent to the time that this act shall take effect, unless he was, at the time such professional services were rendered, duly qualified and registered as a medical practitioner according to the several provisions of this act.

SEC. 5. The supervisor, township, village or city clerk is hereby authorized to administer the oaths required by this act.

SEC. 6. Whoever advertises or holds himself out to the public as authorized to practice medicine or surgery in this State, when in fact he is not so authorized under the provisions of this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be liable to a fine of not less than five dollars nor more than fifty dollars for each offense.

SEC. 7. It shall be the duty of the supervisor and health officer of the local board of health in each township, village, ward or city to enforce this act.

Approved June 6, 1883.

A DISPUTE has arisen between the Louisiana State Board of Health and Dr. John H. Rauch, of the Illinois State Board of Health, and the Sanitary Council of the Mississippi Valley. The first-named Board asked the Governor of Louisiana to request the Governor of Illinois to request Dr. Rauch to attend to the affairs of his own State, and not to meddle with those of Louisiana. The difficulty arose from the recommendations of the Sanitary Council in regard to quarantine against yellow fever.

A RATHER odd suit has been brought in New York by a negro hotel waiter, who allowed eight ounces of his blood to be drawn and transfused into the arm of a white gentleman. The gentleman claims to have paid him and also paid for his services in his hotel bill, but still suit is brought against him for $250.

AN International Board of Health, with headquarters at Geneva or Lugano, is being discussed by several of the European powers.

CHOLERA has appeared among the British soldiers in Egypt at Cairo, Suez, and other points.

COLLEGE ITEMS.

To the chair of Physiology in the Westminster Hospital College, Dr. Heneage Gibbes has been appointed. At Cambridge, England, a chair of Physiology has been created, and Dr. Michael Foster has received the first appointment to it. To the chair of Anatomy in the same school, Dr. Alexander Macalister, of Dublin, and to the chair of Surgery Prof. Humphrey.

PROF. JOHN C. DALTON, the well-known teacher and author who has held the Professorship of Physiology in the College of Physicians and Surgeons, New York, for many years, has resigned the chair. Dr. John G. Curtis, who for several years has been the adjunct professor, will be his successor.

To the chair of Obstetrics and Diseases of Women and Children, in the University of Louisville, recently made vacant by the resignation of Profesrso Theophilus Parvin, Dr. John A. Octerlony has been elected.

THE chair of Diseases of the Mind and Nervous System, in the New York Post-Graduate College, has been given to Dr. Chas. L. Dana, and Dr. J. L. Corning has been made lecturer on the same subject.

NECROLOGY.

WARDER, JOHN A., of North Bend, Ohio, died July 14, 1883, aged 72.

LEFORGEE, WALKER L., died at Decatur, Ill., July 11, 1883; born in Marion Co., Ill. Aged 23 years.

THE Editor of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call the attention of the profession to. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 65 Randolph St., Chicago, Ill.

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

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ORIGINAL ARTICLES.

ADDRESS OF THE CHAIRMAN OF THE SECTION OF OBSTETRICS AND DISEASES OF WOMEN, OF THE AMERICAN MEDICAL ASSOCIATION, READ JUNE, 1883.

BY J. K. BARTLETT, M.D. OF MILWAUKEE.

PART I.

Mr. President and Gentlemen of the American Medical Association:

The position with which you have honored me requires, by ordinance, that a *resumé* of the so-called advances in our special department should be made the subject of this address. This rule has not been observed for the past two years, and would now, perhaps, "be better honored in the breach than in the observance; but being a law-abiding subject, the writer has chosen mainly to comply with it, and will serve you an "olla podrida," containing some recent items of interest, seasoned with personal views upon other subjects, concerning which there is much difference of opinion among the profession. Seen by the light of present teachings, some of these opinions may be deemed heretical; they are certainly conservative, and perhaps it is well, amid the rush and excitement of our modern mode of life and thought, that there should be an occasional protest against the speed with which all earlier views are left far in the background, lest something of real value should be lost and forgotten.

Dr. John B. Hunter, at the close of an article published more than a year ago, said, "The triumphs of gynæcology have been gained almost entirely in the field of surgery." Accepting this dictum, we shall first direct attention to some topics in Gynæcological Surgery.

Two years ago my predecessor, Dr. J. R. Chadwick, when more ably discharging the duty which now devolves upon me, referring to Emmet's operation (a name which seems preferable to the long Greek derivative), stated that "it could hardly be said to have passed from the stage of novelty to that of criticism; that it was destined to be a fertile topic for several years to come, when it would be assigned to its proper sphere, and cease to excite discussion." This was truthful utterance. Our journals, native and foreign, have teemed with cases, papers and criticisms. Prolonged observation has shown that undue influence was attributed to the lesion, and experience has proved, that the relief claimed to follow the operation has not been uniformly attained. A more definite understanding of the conditions really requiring it, and the limits to which it should be restricted, as well as a more just appreciation of its real merits, has thus been attained. As a consequence, medical opinion now indicates with tolerable clearness its permanent status and scope, even if all the conditions are yet fully determined. Dr. Emmet's early statement, "In every instance where laceration is evident, and where enlargement of the uterus still remains, or where the woman suffers from neuralgia, I consider the operation necessary, notwithstanding the parts may have completely healed;" led to its performance in many cases where it was unnecessary, and in which it failed to relieve. A reaction followed the first enthusiastic reception and adoption of the measure, in this country, and sharp, and sometimes unjust criticisms came from abroad.

As an illustration of the truth of the statement that reflex nervous disturbances do not depend upon this lesion, when accompanying it, and may[1] be cured while it still exists, a brief abstract of a case reported by a noted New York gynæcologist, a few months since, will be presented. It occured in a woman 39 years old, who had given birth to a child eighteen years before, and had suffered since that time from pain in the sacrum, right groin, and down the right thigh, with migraine, nausea, and vomiting at the time of menstruation, which function was unduly prolonged. She had been many years under the care of a gynæcologist without benefit. A large bilateral laceration of the cervix existed, with surfaces and angles dense and cicatricial; the movement of the uterus was slightly impeded, and, in the vaginal vault, on the right, closely connected with the upper angle of the rent, was felt a flat, hard, immovable disk, pressure upon which caused pain in the groin, and down the right sciatic nerve. Preparatory to the operation, she was treated locally by hot water irrigations, applications of iodine, etc., and afterward, by the use of tampons, which produced so much disturbance that they were discontinued. Her physician then began the use of galvanism, experimentally, placing the negative pole against the induration in the vagina, and the positive over the right ovarian, and the trochanteric regions alternately. A light current was at first employed, gradually increased in strength for fifteen to twenty minutes, the poles being occasionally reversed. The pain was much relieved by the first application, and the patient expressed herself as feeling easier than for weeks before. The sittings were continued every second day, and the time of

[1] *American Journal of Obstetrics*, Oct. 1882, pg. 909.

use extended to one-half or three-quarters of an hour, the strength being gradually increased to sixteen cells; and during the week preceding menstruation a sound connected with the negative pole was introduced into the uterus for half the time. The succeeding menstruation was attended with scarcely any pain in groin or side, and with migraine only for the first day. The galvanization was continued every day during the next interval, and was followed by menstruation entirely free from pain, or migraine. The application was then made less often. and two more painless periods passed. The patient attended a ball and remained until 3 o'clock A. M., without any unpleasant results. "To all intents and purposes," says the narrator, "she was cured," The plastic exudation had disappeared, hastened, he thought, by the hot vaginal irrigations which had been continued. Of the influence of the galvanic current in producing this result he says nothing. For a month longer the doctor debated, "whether he should not leave well enough alone," but finally concluded to operate. He states that while he has often used the galvanic current to reduce a hyperplastic uterus, he had never before employed it as a uterine application in reflex hemicrania. To the writer such a result is not new or surprising, as for many years he has found it efficient in the same conditions associated with uterine trouble, and a year ago treated and relieved similar symptoms supposed to depend upon cervical laceration.

While there appears to be satisfactory evidence that the great majority of cervical lacerations are attended by no symptoms which can properly be attributed to them; that some even of a severe character have been found by competent observers, which had existed through several pregnancies without producing any disturbance of health; that the operation will not, with certainty, remove uterine hyperplasia, or hypertrophy, and experience has proved it unreliable for the relief of presumably dependent reflex nervous disturbances, and while it is still a mooted point whether it is warranted by the existence even of hereditary tendencies which make it possible that epithelioma may spring from the cicatricial tissue; there yet remain exceptional cases (not perhaps as frequent as Dr. Munde s estimate makes them, twenty-five per cent. of al') of stellate lacerations, where decided local symlptoms are present; and deep bilateral rents with co-existing ectropion, hypertrophy of cervix, and consequent local symptoms, which are speedily and effectively cured by reunion of the lacerated cervix. In such, it is so marked an improvement upon cervix amputation, or the use of the actual, or potential cautery, that for the relief of these alone, the gratitude of the profession is due to the deviser of the operation, to which in honor his name is justly given.

Another operation which has been tested for some years is that of Dr. Battey. Most of the indications, which have been claimed to warrant it, are now generally admitted. Some doubt still exists respecting its ultimate results when performed to check uterine hæmorrhage produced by myomata. It has appeared to be successful in interstitial and subperitoneal fibroids, unless the latter are so large as to prevent the operation; but its results appear more doubtful in the submucous variety, as the hæmorrhage has sometimes returned, after a check of a few months. Even with this doubt, it is indicated in much reduced patients, where enucleation could not be borne. Caution must also be observed where the tumors have been treated by ergot, as there is, at times, a central disorganization and sloughing, which may lead to blood poisoning after the operation. There is also some diversity of opinion concerning its efficacy for the relief of epilepsy, or hystero-epilepsy, and mania, seemingly dependent upon, or associated with, ovarian troubles. Dr. Goodell advocates the operation in such cases of insanity, and quotes Esquirol, to the effect that derangements of menstruation are causal in one-sixth of all cases due to physical causes.

Mr, Lawson Tait, of Birmingham, England, was one of the trio, who each, independently of the others, originated and performed this operation in the months of July and August, 1872. It was published, at that time, only by Dr. Battey, whose name it justly bears. Mr. Tait has since had a much wider field for experience than our modest, but inventive and skillful American surgeon, and quite recently has astonished the profession, abroad and at home, as much by the boldness and originality of his views, as by the remarkable success which he has attained. His deductions controvert some long-established opinions, and whether these are accepted or not, his researches afford clues, which followed, promise to lead to a more accurate understanding of some hitherto obscure pelvic affections. His earlier operations were performed for the relief of hæmorrhage from myomata, and he then removed only the ovaries, but afterward included the fallopian tubes also, an addition which he deems of great importance. He published in July, of last year[1] ,remarks upon the diagnosis and treatment of chronic diseases of the ovaries, in which he advanced the opinion that abdominal operations in the hands of an expert, are so little dangerous as to be justifiable for relief from long-continued suffering; and that the earlier usage of deferring operative interference until life was immediately threatened, was an error. He also states, that all the evidence before him showed the phenomena of menstruation to depend upon the fallopian tubes, and not in the least upon the ovaries; that the tubes are involved in all cases of ovarian disease, and, in the large majority, are the principal seat of the difficulty; that many cases of abnormal menstruation can be relieved in no other manner than by the removal of the tubes and ovaries, and that the proceeding is justifiable; that, in his last series, of thirty-five cases of chronic ovaritis and tubular disease alone, he had lost but one, and, the operation being yet in its infancy, he believes this percentage of mortality can be materially lessened. He claims, also, that these recent operations for oöphoritis have done more to enlighten us upon the physiology and pathology of ovarian disease than all other previous sources of information; that they have also shown that many of the sufferings from pelvic symptoms,

[1] *American Journal of Obstetrics*, July, 1882.

which have been referred to the ovary, are really dropsy, inflammation, and suppuration of the tubes, producing sterility, and a host of painful ailments which make life a burden. The diagnosis, he allows, is not always clear. Examination will often reveal to the practiced finger, in the vaginal cul-de-sac, a fixed tender mass composed of the enlarged and probably adherent ovary, and of the occluded and distended tube; and the peculiar sickening pain felt when this is touched, will afford conclusive proof as to its nature. When this evidence cannot be attained, the presumptive diagnosis must rest upon the history of the case and the symptoms manifested.

Dr. T. A. Emmet, at a meeting of the New York Academy of Medicine, last December[1], stated that he had learned orally from Mr. Tait, that in cases of obscure pelvic inflammation, characterized by severe symptoms, and which did not yield to treatment within a reasonable length of time, he opens the abdomen and invariably finds this dropsical condition of the tubes, which are distended with either serum or pus. The removal affords immediate relief, and it is the only means which can. Dr. Emmet also added that the improvement which he had personally observed to follow Mr. Tait's operations, had been something almost beyond conception.

In a paper read before the New York Academy of Medicine, last December, Dr. T. G. Thomas said, in reference to the views of Mr. Tait, that while he did not feel warranted from his own observation and experience in accepting them fully, he thought there was sufficient of truth in the statements to make the essay the most valuable to the gynæcologist which the present decade had produced. He also mentioned another proposition of Mr. Tait, which was not included in the paper, but orally communicated to Dr. Emmet: That tubal dropsy and ovarian disease are often the real cause of recurrent peritonitis or cellulitis, which is produced by an occasional discharge of the purulent contents of the tubes. Dr. Thomas reported four cases in which he had operated, where great menstrual derangement existed, together with recurrent peritonitis and cellulitis, conditions which the operation showed to have been produced by the state of the tubes described by Mr. Tait. In three of these, the result was very satisfactory; the fourth patient was in an exceedingly reduced physical condition from recent attacks of peritonitis, when the operation was performed, and died on the sixth day, from an insidious attack of the same disease which came on twenty-four hours after. More recently he has operated upon a fifth case, the patient completely bed-ridden, and required no less than ten grains of morphine, subcutaneously, per day, to relieve the intolerable suffering. The ovaries and tubes were again found in the typical condition described by Mr. Tait. He also remarked that no one of the five patients upon whom he had operated would not have considered death a welcome relief from their sufferings.

It appears singular that this condition has not been before noted or suspected; but it is stated that since the publication of these facts, a well known microscopist of New York has said, in his examinations he had frequently noted distension of the fallopian tubes. Mr. Savage, of Birmingham,[1] also takes the ground that hydro and pyosalpinx are met with quite frequently, and states that the first effect of the inflammation is to close the uterine or fimbriated extremities of the tubes, allowing collection of the abnormal secretion; thinks that the relatively large amounts o areolar tissue in the walls of the tubes, as compared with the uterine wall, accounts for the frequent presence of pus in the former. He says the diagnosis must often be presumptive, and based upon the physical signs and clinical history. The operation of removal is often difficult and tedious, from the firmness of adhesions, and the risk of the escape of the fluid contents in the pyosalpinx. The results of such conditions when left to themselves, may be: First, resolution or absorption, which is very improbable when pus is present, and which would not affect the results of former adhesions. Second, bursting into the uterus, or vagina, which *may be* curative, or into the peritoneum, which would be almost certainly fatal. The same physician, later,[2] calls attention to the comparative frequency of recurrent attacks of pelvic inflammation caused by pyosalpinx, and thinks that many cases of supposed pelvic cellulitis hitherto regarded as incurable, can be relieved by the removal of the tubes.

Dr. T. G. Thomas recently introduced a patient at the clinic of the College of Physicians and Surgeons, who was suffering from recurring pelvic peritonitis, and in whom he deemed these attacks due to the cause pointed out by Mr. Tait, as both ovaries and tubes were enlarged. The first attack of peritonitis had been light, the second more severe. He remarked that "although the tubal enlargements could be apparently made out with unusual clearness, still the diagnosis was not a positive one, and he did not think operation advisable, because the woman was not suffering to an extent warranting so radical a procedure." He added, "I cannot impress upon you too strongly, that the dangers of this operation are very great, and the great fault I have to find with Mr. Tait is, that he makes too light of them altogether. I cannot believe that the high standard of success which he has so far maintained, will be kept up in the future." This opinion corresponds with that expressed in an able paper read by Dr. G. I. Engleman before this Association in 1878, in which he faithfully depicts the difficulties and dangers of Battey's operation; but Mr. Tait does not always "make light" of these difficulties, for in a paper published in February of this year, he says, speaking of the hydro and pyosalpinx cysts: "Generally they are much smaller, holding only a few ounces, and then their removal, by reason of dense adhesions, constitutes by far the most difficult class of cases I ever have to deal with. Why the simplest of all, the removal of a parovarian cyst, should be classed as an 'ovariotomy' and held up for admiration, and these most difficult cases dubbed 'Oöphorectomies,' and held up to scorn, I cannot imagine."

[1] *New York Journal of Medicine*, January, 1883.

[1] London *Lancet*, January 6, 1883.
[2] Birmingham *Medical Review*, January, 1883.

Dr. P. Harris' paper upon the revival of symphysiotomy in Italy,[1] is worthy of notice from the remarkable success which attended the operation. Between 1866, and December, 1880, fifty cases are reported, with eighty per cent. of maternal recovery and eighty-two per cent. of living children. Nine of the ten women who died were delivered of living children, and eight of the nine mothers who bore dead children, recovered. Of the children lost, five were shoulder and breech, and four vertex presentations. In only one instance did mother and child both die, and this was a case of back presentation, operated upon on the fourth day of labor. There have been three additional cases since, in which all the mothers recovered, but two children were lost. All the operations were performed upon rachitic subjects, the deformity being generally antero-posterior contraction. The separation at the pubis amounted to about two inches, which was obtained without any effort, and without lesion of the sacro-iliac synchondroses. An immovable dressing secured firm reunion of the parts in all who recovered? No after pelvic disease occurred, and the women were in good health. In one case only, vesico-vaginal fistula followed, which was easily cured. The operations were performed principally by Professors Morisani and Novi, of the University of Naples. The section is made subcutaneously, with a probe-pointed sickle-shaped bistoury; an incision being made above the pubis, the knife is slowly passed behind the symphysis until it reaches the pubic arch, when its cutting edge is brought to bear upon the ligaments, and they are divided from below upward; the pelvis is not forced open, the fœtus not dragged upon, but when the head presents, the conclusion is generally left to nature. The incised part is treated antiseptically, and by irrigation in warm weather, and as soon as convenient the bones are kept in opposition by the immovable dressing. The usual time for complete pelvic restoration was from forty to fifty days. Dr. Harris remarks that "this more extensive test upon the living has proved that greater pelvic mobility exists than John Hunter demonstrated upon the cadaver;" each inch of pubic separation, though increasing but little the sacro-iliac, adds to the transverse and oblique diameters, and makes it possible, if time is allowed, for the head to mould itself sufficiently to pass; this result is shown by the statement that forty-two out of the forty-six vertex presentations were thus delivered alive, with a recovery of eighty per cent. of the mothers. Dr. Harris states that the Porro operation in Italy saved 45.5 of the women and 77.5 of the children; and I find elsewhere that he has stated,[2] that out of the last twenty-eight cases, from May, 1879, fifty per cent. of the women were saved. But the two can hardly be compared, as the sphere of symphysiotomy is confined to those cases having a conjugate of 2⅝ inches (sixty-seven millemeters), and upwards; cases not very uncommon, where the pelvis is somewhat too small to permit the birth of the child, and in which premature labor would save it, did opportunity offer. With a diameter less than 2⅝ inches, other means must be adopted.

[1] *American Journal of Medical Sciences*, January, 1883.
[2] *British Medical Journal*, April 21, 1883.

Dr. Montgomery, of Philadelphia, not long since published conclusions which he had drawn from an analytical study of this subject, which are here briefly stated. That craniotomy is never justifiable, since it is our duty to try and save both mother and child. That in pelvis of a conjugate of 3.25, or over, forceps can be employed, when 2.75 or upwards, version; 2⅝ or over, symphysiotomy, and in less than 2½, the Cæsarian section, performed reasonably, offers better results for the mother. This should not, however, be the old operation, but the modification recently introduced, I think by Sanger,[1] which has been found more successful than the old method; and a case is recently recorded which was operated upon by Dr. Leopold, in Germany,[2] in which both mother and child were saved.

In a limited number of cases, when the os is dilated, laparelytrotomy may be preferable to uterine section. In all lesser degrees of distortion, when opportunity is afforded, or in subsequent pregnancies, premature delivery should be induced.

EXTRA-UTERINE PREGNANCY.

Some important advances have recently been made in the treatment of extra-uterine pregnancy up to a certain stage of its existence, which appear to offer a safer and surer path out of this difficulty than previously discovered. The first instance of this treatment which the writer has found recorded, was reported by Dr. J. C. Reeve, in 1879.[3] In this case the diagnosis was positive, and the time about the end of the third month. Faradization was used as strong as it could be borne, for nine days successively, for about ten minutes each session; one electrode upon the tumor in the vagina, the other, sponge covered, carried over the external abdomen. Ten days after the last application the patient was decidedly better, and in a month the breasts had become flaccid and the tumor gradually decreased in size. This was successful, although accomplished with inferior apparatus, and more than necessary disturbance. Cases have been reported within two or three years, by Drs. Lusk, Bache, Emmet, and others, where the diagnosis was regarded as satisfactory, and similar treatment was successful. Dr. T. G. Thomas last year,[4] in a paper upon this subject, fully discussed the means of diagnosis, and related the results of his own experience in twenty-one cases. Six of these were treated by galvanism, and all recovered. His conclusion is, that if such a tumor be discovered, and its nature tolerably settled before the fourth month, the destruction of the fœtus by galvanism should be preferred to any other method of treatment. If there should be error in diagnosis, it could do no harm, if diagnosis were correct, experience proved it effective. Dr. Garrigues remarked that it had been successful up to the middle of the fourth month in every case in which it had been employed, and he thought it could be used with advantage at any period of fœtal life. The last communication upon this subject was from Dr. A. D. Rockwell, the operator in many of

[1] See paper by Dr. Garrigues, *Am. Journal Obstetrics*, May and June, 1883.
[2] Archives fur Tynaskel, xix p. 400.
[3] Trans. Am. Gynæcological Society, 1879.
[4] " " 1882.

Dr. Thomas' cases,[1] in which he reports seven cases, with the method of use of the agent. His first case was one of tubal interstitial pregnancy at almost three months, and was perfectly successful. More recently he had treated three which had been published, and three more which had not. The results in all, more thoroughly establish the value of the treatment. Two of these will be briefly epitomized to show the method. His fifth case was declared by Drs. Thomas and Emmet to be a combination of both intra and extra-uterine pregnancy, and was about two and a half months advanced. There was a tumor of the size of a pullet's egg distinctly perceptible two inches to the left of the median line, and nearly on a level with the pelvic basin. It could be moved from Douglas' cul-de-sac towards the margin of the ribs, and it gradually increased to the size of a billiard ball. The negative pole of a galvanic battery was brought into contact with this growth through the vagina, the positive, a large flat electrode placed upon the abdomen, the object being so to diffuse the current as to produce the least possible action upon the abdominal muscles. The maximum strength employed was eighteen cells, or power of twenty-four volts, used with rapid interruptions. This was repeated four times in six days.

The tumor not only diminished perceptibly in size, but changed its position an inch or two. Since that time it has gradually grown smaller, until now, three months after, it can hardly be detected; at the same time there is now developing, in the uterus, a six months' fœtus.

The sixth case was about four months advanced, a current of twelve cells (about 16 volts) was used, interrupted for ten minutes, then quickly increased for one minute without interruption. Great care was exercised, in this case, on account of the increased distention of the fallopian tube from the more advanced stage, and the consequent danger of rupture. A second application, the following day, concluded the treatment. Two weeks after the tumor had decreased one-half, and, after several months, cannot be perceived by external examination.

In the last case, the pregnancy had advanced to the third month, and the tumor, about the size of a child's fist, was movable, and could be distinctly felt, both from without and within. An anæsthetic was given, at the advice of Dr. Emmet, for fear of cyst rupture from involuntary movements; a current of 16 volts only was used, and repeated three times afterward, at intervals, during six days. The contour and seat of the tumor were changed after the first application, and it rapidly decreased in size. The treatment was repeated afterwards to accelerate the process of absorption.

This method of treatment is safe and simple, only requiring caution, in advanced cases, to avoid rupture of the sac by too much strength of current. Galvanism is decidedly preferable to Faradism, as being more certain. Catalytic effects pertain only to the former, and the changes produced by this action, in organic bodies, continue long after the current has been used.

[1] New York *Medical Record*, February 17, 1882.

POST PARTEM HÆMORRHAGE.

A reference to some recent suggestions for the relief of severe cases of post partem hæmorrhage and of the collapse which follows: The hypodermic injection of ether has been lauded in extreme acute anæmia. It appears, however, only to act as a temporary stimulant, of the same character as the introduction of a small quantity of ammonia into a vein. Professor Hayem's experiments on artificially exsanguinated animals, recently detailed at a session of the Paris Academy of Medicine[1], prove that no effect is produced except a temporary excitation of the heart beat, while the use of defibrinated blood, in many cases, prevented a fatal result.

Professor Chahbazian, of Paris[2], extols an alkaloid of ergot, called ergotinine, which is prepared by M. Tanret, of Paris. Only three grains of this can be obtained from a pound of the ergot. One-fiftieth of a grain is dissolved in twenty minims of alcohol or chloroform, and five to ten minims of the solution injected hypodermically, to be repeated, if necessary, but never to exceed twenty minims in all. He states that it acts very speedily and energetically, uterine contraction following its use in from two to five minutes.

Dr. Langay, of Paris, says that he has found faradization the speediest and most effective means of producing instant and energetic uterine contraction in cases of this difficulty.

Dr. J. F. LePage, in a recent article[3], refers to an old but now neglected method, auto-transfusion, in acute anæmia from post partem hæmorrhage, and believes that where patients are not in articulo mortis, it will prove successful.

It is also again recently referred to by Mr. Percy Boulton[4], who, after enumerating the ordinary means, including hot water 110° to 120° injected into the fundus uteri by a syphon syringe, says, should symptoms of collapse appear, raise the foot of the bed to an angle of 45°, apply a sinapism over the heart, and bandage firmly legs and arms, beginning at the extremities, etc.

Confidence in the practical efficacy of direct blood transfusion, in cases where death appears imminent, has very much lessened in France, Germany, and England, and Dr. Lusk, one of our late authorities, says, that although theoretically it is the most rational method of treatment—practically it is unsatisfactory. Dr. Matthews Duncan, at a meeting of the London Obstetrical Society, last January,[5] spoke of transfusion as merely a hopeful proceeding, remarking that patients who survived it were often spoken of as being saved by it, which was a manifest mistake. In many cases it has caused death, and most of the difficulties and dangers were produced by the attempt to transfuse blood.

These estimates are due partly to the uncertainty of obtaining a blood supply, and to the unpleasant symptoms which often, and the fatal results which, at times, follow direct transfusion, and partly to the

[1] *British Medical Journal*, February 17, 1883.
[2] *London Lancet*, January 1, 1883.
[3] *British Medical Journal*, April 22, 1883.
[4] *London Medical Times-Gazette*, May 5, 1883.
[5] *British Med. Journal*, January 27, 1883.

delicate instruments and manipulations required. To mediate transfusion may be objected the same want of blood supply, and the loss of time occupied in defibrinization and re-heating, the chance of embolism from imperfect separation of all fibrinous particles, and the possible danger of contamination from bacteria during the process of whipping. Other fluids have been suggested, such as fresh milk, by Dr. Thomas; but this is found open to grave objections, and has been but little used. Many years ago weak saline solutions were suggested where blood could not be obtained, but physiological objections were strongly urged against the measure. Dr. Barnes states that they were employed, some years since, by Drs. Little, Woodman, and Hickford, in England, and that one of the cases of Dr. Woodman recovered.

Mr. Schwartz published, about two years ago, the result of experiments made upon artificially exsanguinated animals, with the conclusion that a saline solution thrown into a vein would relieve the phenomena which accompany an extreme degree of anæmia. The first application of this to the human subject, in Germany, as far as records are accessible to the writer, was made by Dr. J. J. Bischoff, in 1881,[1] in a case where death seemed imminent from hæmorrhage; who injected into the left radial artery, on account of the difficulty of finding superficial veins, about forty ounces of a solution of common salt, six parts to one thousand, with the addition of a few drops of lye, as no soda was at hand. This was allowed to flow slowly in, from a receptacle elevated a little above the arm, and an hour was occupied in the process. During this time the pulse fell from 156 to 122, and rapid improvement of the patient was observed, followed by recovery. None of the unpleasant symptoms of oppression, which attend blood transfusion, were manifested. Schwartz has recently published his conclusions more fully,[2] in which he states that death from cessation of the circulation is due not so much to the great diminution of the blood globules, as to the disproportion between the size of the vessels and their fluid contents, and that the latter is safely and surely remedied by injections of weak alkaline solutions. The minimum quantity to be administered to an adult should be about five hundred cubic centimeters (about seventeen ounces). He also reports a violent hæmorrhage following the removal of uterine cancer, where the pupils were insensible, consciousness lost, etc., where he injected one thousand cubic centimeters into the median vein, with the most satisfactory result. He mentioned five other cases which were reported by Bischoff, Küstner, Kocher, and Kümmel.

Recently it has been again brought into notice in England.[3] Mr. Jennins, resident accoucheur at the London Hospital, reports a case which occurred, last August, in a woman who, after a fall at full period, was attacked with profuse antepartum hæmorrhage, and was collapsed, to a marked extent, when seen. The os was fairly dilated, and right shoulder presenting. The flooding was temporarily checked by hypodermic injections of sclerotic acid and brandy, and, thinking that any attempt at delivery would prove fatal, the median basilic vein was found with much difficulty, and sixteen ounces of a saline solution thrown into it, by means of a common metallic syringe. Signs of animation are stated to have speedily followed, vision, hearing, and speech returned, and the subsequent progress was favorable. The solution here used was composed of common salt fifty grains, chlorate of potash three grains, sulphate and carbonate of soda two grains each, to twenty ounces of water, to which two drachms of absolute alcohol were afterward added.

Mr. Coates related two cases before the Obstetrical Society of London, December 6, last year,[1] both of severe secondary hæmorrhage after labor. In the first it had recurred violently several times, and continued, on the last occasion, for eight hours after the patient was seen by the medical attendant. She was found almost moribund, unconscious, and pulse barely perceptible. The saline alcoholic solution was allowed to flow into the radial vein, the only one perceptible of any size. The result is described as marvellous—sight and consciousness returned, and she was soon able to retain stimulants.

In the second case, the hæmorrhage occurred the ninth day after labor, following labor at stool. Half an hour after, her appearance showed a great loss of blood, which was still flowing in gushes. The uterus was relaxed, filled with clots, and could be felt externally, extending almost to the ensiform cartilage. The os barely admitted a finger. Sclerotic acid hypodermic injections, ice, kneading, etc., failing to arrest the hæmorrhage, she was brought to the hospital. She was much worse after her arrival, and one of Barnes' dilators was introduced, with a view of further examination. Before this could be accomplished her condition became most critical—pulse hardly perceptible, respiration irregular, extremities cold, jactitations, etc. The median cephalic vein was found after some delay, and twenty-two ounces of simple water, at a temperature of 100° F. injected. The pulse ceased to intermit, respiration improved, sight returned, and the uterus slowly but distinctly contracted. The os being now fully dilated, the uterine interior was examined, but nothing found to explain the flooding. As there was still considerable bleeding, the uterus was swabbed out with a mixture of equal parts of a saturated solution of persulphate of iron and water, and an enema of beef tea and three ounces of brandy administered. In a short time she could swallow, and stimulants were freely given. The patient progressed uninterruptedly after this, having no bad symptom except a rise of temperature to 102° F. for the first few days. The narrator thinks that the omission of the salines in no way lessened the success of the injection, and though a fluid of a different specific gravity, and one previously supposed to produce swelling of the red globules, and loss of pigment, the result was wholly beneficial. He also states that he examined the globules microscopically, twenty-four hours after the injection, and there was no obvious alteration in their appearance.

[1] *New York Med. Journal*, February, 1882.
[2] *Berlin Klin. Woch.*, No. 40, 1882.
[3] *London Lancet*, Sept. 16, 1882.

[1] *London Lancet*, Dec. 30, 1882.

Dr. Robert Barnes, referring to this case,[1] said: "That the dynamic condition of the circulation, under such conditions, can be restored, even to a partial extent, by the injection of twenty-two ounces of simple water, is one of the most interesting physiological and clinical demonstrations I have recently observed."

Dr. H. J. Garrigues, of New York, after advocating the injection of defibrinated blood, in place of direct transfusion, closes a short recent article, thus: "When blood cannot be obtained, I should prefer a saline solution as containing no foreign substances, no solid corpuscles—being always attainable, and not liable to decomposition. Table salt is found in every house, and all that is needed is to inject a half per cent. solution of this substance."

It is not improbable that all the cases which have been cited might have recovered without intravenous injection; but as a prelude and adjunct to other measures, where the prostration is so great that stimulants or nutriment cannot be taken or absorbed, this offers a safe and ready auxiliary. The knowledge that such a remedy is always at hand, and that it can be used with safety and decided advantage, appears a great accession to our therapeutic resources in these alarming cases.

FORCEPS.

A few words upon a subject not novel—the frequency of forceps' use now taught, and the existing tendency to the abuse of this valuable aid to the obstetrician. For many years past much thought and labor have been expended upon this instrument. A majority of teachers, and some who are not, have introduced new forms and variations, each claiming some superior quality. Much of this has been undoubtedly due to the increased knowledge of the *rationale* of labor, but the pendulum appears to the writer to have swung too far in this direction. One of the latest additions is the invention to which Dr. Alex. Duke called the attention of the Obstetrical Society of Dublin last year. It consists of tractors, which are applied with the forceps blades, and before they are locked; these can be attached to a belt about the waist of the operator, and with toe-caps upon his shoes, to prevent slipping, the inventor claims an immense gain of power for shortening labor. He considers that there is more chance for the child and less risk to the soft parts of the mother, by pulling the head forcibly through the pelvis than if allowed to remain and mould itself to the outlet. We shall probably next hear of a small electro-motor of one-horse power, so arranged as to do the pulling, and save the operator as well as the mother any exertion.

The contest between the advocates of a judicious use of forceps and those who employ them with unwarranted frequency, has been going on in Great Britain for some years. Arguments for the latter course have been based upon statistics, claimed to show a considerable gain to maternal and a large one to fœtal life from this practice. Statistics possess valuable elastic qualities. Four years ago this evidence was examined and reported upon by the writer with widely different conclusions. Others have drawn the same. Dr. Galabin, from statistics of over 40,000 cases, proved that the maternal mortality when the forceps was used once in ten or twelve cases, was nearly double that which occurred when they were seldom used, while the gain to infant life was only 0.4 per cent.

While this is being written, an address of Dr. Denham, presiding officer of the Obstetric Section of the Academy of Medicine in Ireland, has appeared. In this he cites statistics of the Rotunda Hospital at Dublin, taken from the reports of Drs. Collins, Shackleton, and the more recent ones of Dr. George Johnston, amounting in all to over 39,000 cases. Commenting upon the figures, he says: "It is patent that by the more frequent use of forceps in modern obstetrics much has been done for the relief without adding to the danger of labor." This is a most singular deduction, as the figures clearly show that Dr. Collins, who used forceps in 1.6 per 1,000 women, lost 9.99 per 1,000; Dr. Shackleton, who used them in 14.5 per 1,000, lost 11.8 per 1,000; while Dr. Johnston, using forceps in 82.4 per 1,000, lost 18.98 per 1,000, the maternal mortality being almost double that of Dr. Collins in about eighty times the number of forceps cases, nothing is said of the fœtal life. No one can have a higher estimate of the value of this instrument, when really needed and skillfully employed than the writer, but have we not gone far beyond this, and all rational limits, in instrumental obstetrics? The tendency of present teaching and practice is to send forth young men who are not, and cannot be, skilled in forceps use, with the conviction strongly fixed, that if there be some delay in the second stage of labor, forceps is the immediate remedy.

Dr. Hamilton, of Falkirk, formulated a general rule that the second stage of labor should not be allowed to last usually much more, and sometimes even much less, than two hours; and similar opinions obtain with us. Five years ago the writer heard expressions from members of a society which should be, and is, regarded as of the highest authority, which were so extremely radical as to excite great surprise. It was claimed by one, that if there was a cessation of advance by the head for fifteen minutes during the second stage, forceps should at once be used. Another stated that after waiting a time for nature, even if he knew that in two or three hours more the labor could be successfully completed by her efforts, rather than subject the woman to this additional pain it was the duty of the accoucheur to apply the instrument and deliver at once. There were, however, present those older and of wiser counsel who differed much from these opinions, and suggested that the tone of the discussion needed modification.

Rules specifying any time beyond which the application of forceps should not be delayed, appear to be made rather for the benefit of the doctor, than that of the patient. Time is a very unsafe guide when the interest of mother and child only are concerned. Natural labors are often eight, ten or more hours in the second stage, and terminate in all respects successfully for mother and child. Nature requires time,

[1] *London Lancet*, Jany. 27, 1883.

especially in primiparæ, to mould the head to the pelvic outlet, and at intervals, progress is hardly perceptible. The cause of retardation, and the maternal conditions are the considerations which should influence interference. If impaction is *positively* shown, forceps; if retardation is due to loss of nervous power in the mother, quinine; if to insufficient uterine effort, ergot, discreetly and properly used. But the fashionable usage of the day calls for forceps, whatever the cause of delay. The young physician thus taught will never dare to wait sufficiently long to know what nature can accomplish, because of the vivid picture of impaction, sloughing, death of child, etc., which will rise before his excited fancy. It will be long, if ever, before he learns that such dangers are very much overstated, as my own experience and that of thousands who commenced their work before this forceps craze became rife, can testify. A knowledge of healthy action is necessary to, and must precede an understanding of pathological conditions. He who has never ascertained what nature's forces can accomplish in labor, cannot compare the results of this physiological process with those produced by his own interference, and consequently never will realize that what has been done artificially by his so-called, and often miscalled aid, might have been better and more safely accomplished without it.

An able editorial appeared in the *London Lancet* a few months since, deploring the want of means of instruction in practical midwifery, and urging the necessity of providing increased facilities for this purpose. The writer remarks: "A knowledge of *how* to use instruments is no more, or even less important than the knowledge of *when* to use them, and the latter is more difficult of acquisition than the former;" and again: "Otherwise students go forth with instructions to use forceps when labor is delayed, or at least when it ceases to progress, and great injury, both to patients and doctor, is the result of their ignorance of both the above items."

These words are hopeful indications, since they evince a partial comprehension of the mischievous results which attend the use of forceps in unskilled hands.

What motive can even the *expert* in their use have, to apply the instrument when he thinks labor will be safely ended in two or three hours without interference. Anæsthesia offers relief from pain, without danger, and there certainly is more tendency to after hæmorrhage from hastening labor by the instrument.

What is the reason for thus interfering? Can it be economy of time for other engagements? This motive would not be generally avowed by those who thus act, but it is, at times, openly acknowledged.

Six years ago Dr. West, in his presidential address to the Obstetrical Society of London, used the following language: "There is one point on which I think it impossible to insist too strongly—instruments are to be used and operations resorted to for the sake of the patient and the child, never for the sake of the doctor; and yet I have in years gone by heard men say 'I could not wait any longer; I had this or that to do, so I put on the forceps and got the case over.'"

To-day, in a recent journal, the writer chanced upon the following statement, from one well-known in the profession. Speaking of a case of labor, he says: "As the head rapidly neared its exit, and a few more pains would have expelled it"—suffice it to say he applied the forceps in order to shorten labor by one-half hour, to be in time for another engagement. This gentleman knew that in his hands the instrument would do no harm, but he also knew that it was unnecessary, and the motive for its use an improper one.

It must be remembered that those who are experts in forceps use are very few when compared with the numbers who practice obstetrics. If this is the rule for the expert, it will certainly be the *practice* of the non-expert, and at a cost to female humanity such as elicited the strong language of Dr. Goodell, when he said: "To tell you the truth, such grave lesions to the mother, and for that matter to the child also, are so constantly brought to my attention that I am disposed to accept Baudelocque's dictum, that, take it for all, the forceps has been more injurious than useful to society."

Even if used, as probably it mostly is, really and only for the sake of relieving the mother from some hours more suffering, such relief is often dearly bought, and the attendant, if competent for his duty, has or should have, a power in anæsthesia not only to relieve the pain, quiet complaint, and sustain the patient, but one which will subdue any spasmodic or irregular action, assist in perineal dilatation, and contribute to make delivery safer if not more speedy.

Within a few years the writer has found it necessary at different times to leave two primiparæ just before labor, in charge of different brother practitioners. They had both been trained in the recent practice, and considered themselves fully competent to use forceps. The women were healthy and well proportioned, and the writer feels assured could have been safely delivered naturally, after a somewhat tedious first labor. Forceps were used in both cases. One had a severe double cervical laceration extending to the vaginal junction, the other a perineal rent extending into the rectum, neither of which accidents, of sufficient importance to attract attention, ever occurred in the writer's obstetric practice of over forty years.

In view of such facts, and with the knowledge that they are of daily occurrence, how can one who has delivered many hundreds of women with but sparing use of forceps, and results for mother and child which will compare well with those which any frequent forceps advocate can show, how can such an one avoid a protest against this fashion of the time, in the name and for the sake of the mothers, as well as for the ultimate repute of a useful, but now much misused instrument.

ERGOT AND ANÆSTHESIA IN LABOR.

The object in noticing this subject is to suggest a reason for the wide difference in opinion which exists with regard to its usefulness in obstetrics. The statement has been not infrequently made that ergot should never be used during actual labor, because it produces tetanus and permanent contractions, which are dangerous to both mother and child. The effects of any medicine vary exceedingly, in accordance

with the genuineness of the article, the dose given, and its mode and frequency of administration.

In this country, fluid and semi-solid extracts have been thought reliable. The object to be attained by its use in the second stage of labor is merely a sufficient additional impetus to render feeble and inefficient uterine contraction more regular and effective. The object when used, as it constantly is, to check post partum hæmorrhage, or as a preventive to its occurrence, is to secure full and permanent contraction. If the same doses are used for the former purpose as for the latter, is there any cause for wonder that effects result such as have led Dr. Barnes to say: "When you have given ergot, you are likely to be in the position of Frankenstein—you have evoked a power which you cannot control. Ergotism, like strychnism, will run its course." Would Dr. Barnes hesitate to use strychnine as a nerve tonic, from the fear that strychnism, as he terms it, would follow?

The dose of ergot necessary for securing contraction after delivery is not so important, provided enough is given. In providing it for the widely different purpose of strengthening insufficient uterine contraction during the second stage of labor, there is evidence of a general ignorance or carelessness as to dose and repetition. Very little has come under the notice of the writer in which reference was made to properly small and repeated doses. Leishman advises an infusion of sixty grains to six ounces of water, one-fourth to be given every ten or fifteen minutes until distinct increase of action is manifested. This is about twice the needed dose, and repeated much too often.

Playfair says fifteen to twenty grains of the powdered ergot mixed with water, or the fluid extract in doses of twenty to thirty minims will make uterine contraction more efficient in fifteen minutes, and says nothing of repetition. He does, however, remark: "Perhaps, as has been suggested, the administration of the fluid extract—five to ten minims every ten minutes until energetic action sets in—would remedy some of its risks."

Dr. Lusk advises entire abstinence from its use, unless as a prophylactic against post partum hæmorrhage. One paper only has come to the notice of the writer in which smaller doses are advised from practical experience. This is from Dr. W. H. DeCamp,[1] who declares his conviction that ergot can be safely and beneficially given for the purpose named, provided the dose is properly regulated. He states that ten to fifteen drops of the fluid extract will always excite uterine contraction, and that it must not be pushed too far, or tonic contractions may result.

The writer administered this drug for many years, in cases not very frequently seen, where the second stage of labor was retarded by insufficient contraction and no pelvic obstacle existed. He regards it as a valuable resource in such cases, and has never witnessed, in his own practice, the tetanic contractions attributed to it since he learned how to employ it. For this purpose an infusion of the freshly and coarsely powdered kernels, two grammes (about thirty grains,) to eighty-five grammes of water, or about three ounces, has been the preparation used. Of this a tablespoonful given every thirty minutes until some effect was apparent. In some cases this was obvious after one dose, in some two or three were required. In cases of nervous exhaustion on the part of the patient, a full dose of quinine was also given.

It should be added that the writer, as a rule, makes use of anæsthetics in labor, save in some exceptional cases of feeble uterine action, and that where ergot was administered and the pains become efficient, the anæsthetic was also used. How much modification of the effects of the former were produced by the latter agent he cannot positively determine, but is sure that they act well together.

Dr. Fordyce Barker, at the last American Gynæcological Society session, after enumerating the conditions in which ergot was inapplicable, stated that there were cases where it could be used with great advantage. He usually gave an anæsthetic and then full doses of ergot, and the result had generally been that labor was speedily and successfully terminated.

In this connection it might be mentioned that Mr. Fancourt Barnes claims that nitrate of amyl possesses properties antagonistic to ergot, and states that three minims of this drug, added to one drachm of ether, and taken by inhalation, will act as a sedative and anæsthetic without producing loss of consciousness, and will also subdue the trismic contractions produced by full doses of ergot.

There is no doubt that this drug has been abused, and what valuable agent in the materia medica has not? That it has been given when entirely inappropriate, with only deleterious effects. There is no less doubt in the mind of the writer that the crusade against it has been due, not entirely to its improper use, but to the fact that the fashion of ergot use has given place to the fashion of forceps use, in hastening labor. Forceps, however useful, do not take the place of ergot. The child may be speedily removed by the former, but the ergot must be given after, to prevent the hæmorrhage which insufficient uterine action is apt to induce.

The contrariety of views in regard to the usefulness of anæsthesia for the relief of pain in labor, also appears to the writer only explainable upon the supposition that it has been improperly and injudiciously used by those who oppose it. This has been before the profession between thirty and forty years, and during this whole time, and to-day, many obstetricians of eminence constantly employ it as safe, serviceable and entirely beneficial, while others denounce it as inducing post partum hæmorrhage, and various other evil effects, both upon mother and child.

The writer has previously recorded the favorable results of his own experience in its use since 1847, and can here only attempt briefly to show how such diverse opinions may be, and probably are, the result of faulty administration.

Mr. Coates, in a recent article[1] upon the true method of inducing surgical anæsthesia safely, by the use of small quantities, repeated as often as needed to produce the desired effect, uses an illustration which is even more applicable to its obstetric use. He says,

[1] *Western Medical Reporter*, October, 1881.

[1] *London Lancet*, January 27, 1883.

"the educated practitioner, who has made up his mind to give one grain of opium every hour, or twenty grains of chloral every four hours, for twenty-four hours, would hardly think it the same thing to give the twelve or sixty grains at once. There are three stages of anæsthetic effects which may be produced: First—the lessening or annulling of sensibility to pain; second—by increased dose, the abolition of intelligence; third—the abolition of mobility. The method and object of anæsthesia in surgery and labor differs very widely. In the former it is generally carried to the second if not to the third stage of effect before the pain is inflicted. For the latter it is rarely necessary to produce much more than its first effect, and this is produced "pari passu" with the pain. A little experience will soon teach the physician how to arrest its effect at this stage, or at least before the second is fully attained, and to vary the amount as may be required by different degrees of pain.

Care in administration as to the quantity employed and the length of time, and regularity, of inhalation, is the whole secret of successful use. As a rule it should not be regularly given until the beginning of the second stage of labor, although where progress at an earlier period seems delayed by the rigidity of the os, the inhalation of ether in small quantity will quiet irregular contractions, and effect a more rapid cervical expansion. After the second stage of labor is reached, inhalation should be allowed only with each pain, commencing when uterine contraction is first felt to be returning, by a finger in the vagina, or by the sensations of the patient, with full inspirations for a minute or two, until uterine contraction has reached its climax. The inhaler is then at once to be removed, and not again used until the pain again recurs. When little experienced in its use, the writer sometimes allowed inhalation to relieve feelings of discomfort or alleged pain during the intervals of uterine contraction. This resulted in irregularity of recurrence, and disturbance. He can clearly see that where the rule of administration just given is not mainly adhered to, disappointment as to general results might ensue. Not only should the time of administration exactly correspond with that of the commencing and augmenting pain, but as the labor progresses, and pain increases in severity, the dose should correspond.

There is no proof which the writer has ever seen, that used in such a manner, anæsthesia produces, or tends to produce, post partum hæmorrhages.

Dr. Barker spoke very positively upon this subject[1] when he said, last fall, that he had used chloroform in several thousand cases, and had not had post partum hæmorrhage but in one instance. He always, however, gives ergot after placental expulsion, to promote uterine involution.

It has been said to narcotize the child and lessen the favorable convalescence of the mother. The writer has seen no evidence that this is true. Where it has been used most fully and freely, the children have cried vigorously immediately after birth, and as to the mothers, the conviction was strongly forced upon him that convalescence was more rapid and perfect under its use, when compared with the previous results of six years without it. We all know how pain exhausts nervous power; this is avoided.

In conclusion, if anæsthesia ever produces post partum hæmorrhage, injury to child, or other than beneficial results, experience tells us that it must be due to the impurity of the anæsthetic employed, or to the want of that experience and discretion in its use, which is necessary not only here, but in all therapeutic measures which we employ for the relief of human suffering.

[1] Trans. Am. Gy. Soc'y, 1882.

ANTISEPTICS IN PRIVATE OBSTETRIC PRACTICE.

A few words of inquiry as to the extent and necessity of aseptic precaution in ordinary labor in private practice. A little more than a year since Dr. Robert Barnes published[1] a paper upon the subject containing many valuable suggestions. He divides toxæmia into endosepsis, autosepsis, and exosepsis, and counsels measures for the avoidance of each. With auto-infection, at present, we shall mostly deal. For the avoidance of this he gives directions for routine aseptic minutiæ, including washing out the uterus once or twice daily, with plain or carbolized water—the attendant bathing the hand in carbolic acid solutions, all chamber utensils being rinsed with the same, and a little left in them.

None of those prophylactic measures seem to the writer necessary in cases of uncomplicated labor, and some of them absolutely dangerous. Intra-uterine injections are especially so regarded, and even those of carbolic acid solutions into the vagina have not always been harmless. Dr. Minot, of Boston, a few months ago, wrote[2], that "he had been in the habit of using carbolized vaginal injections after labor, but since alarming symptoms had followed in two cases, he now only makes use of them when the lochial discharge becomes offensive." At a meeting of the New York Academy of Medicine, last March, a case was related, in which, after a week's use of uterine injections, a chill, followed by a decided rise in temperature, occurred, and Dr. Barker stated that, although he had occasion frequently to resort to this measure, it must be used with care and not too long, even in conditions which required it. He remarked that the uterine sinuses closed ordinarily within three or four days after labor, and he had seen cases where he felt convinced that the use of this means, by the Chamberlain tube, had reopened some of the blocked up sinues, and absorption of septic material had followed. In normal cases, outside of hospital service, the writer must think it bad and meddlesome practice to use not only carbolic solutions for vaginal and uterine injections, but *any* vaginal douche, on account of its tendency to remove from the bruised and excoriated surfaces an exudation which nature provides for their protection; besides, such measures as used by ordinary nurses may, through carelessness or ignorance, be made to supply increased facilities for septic contact and absorption. But whatever may be the necessity for such measures, or others, in hospitals, when the atmosphere is loaded with poisonous emanations, and however necessary strict cleanliness

[1] *American Journal Obstetrics*, January 1882.
[2] *Boston Medical and Surgical Journal*, November 23, 1882.

on the part of the attendant at all times and in all places, an experience of upwards of forty years convinces the writer that either these minute aseptic usages are unneccessary, or, that a great and sudden change has taken place in our external conditions, or in the female organization; for, during the attendance of many hundreds of obstetric cases, not unfrequently severe and protracted, in which there was very little interference with nature's powers, and no aseptic precautions observed, except cleanliness as far as possible, very few cases of child-bed fever developed, none of any gravity, and among his own patients he never saw one fatal. There is no question as to the utility of vaginal irrigation, carefully performed, in cases of fœtid lochia, when associated with rise of pulse and temperature. We have, in this case, absorption of the products of decomposition. It has been stated that the poisonous principle of septic fluids has been isolated in the form of two alkaloids. Dr. Simpson, of Aberdeen, considers this proved. This is, however, not material to our purpose; the poison is there, and in the present state of our knowledge, we have no proof that we can chemically destroy it in the human organism, by any agent which can be safely used. We can remove it, not by a syringe, but by thorough irrigation from a reservoir which affords a constant stream of water at 96°, until the fluid shows itself clear as it flows out. The material used is of little importance, provided it be harmless. Its value does not depend upon the addition of a germicide of sufficient strength to destroy bacteria, for its purpose is simply to wash away the decomposing detritus of blood and tissue. Lesions of the vaginal tract or uterine neck are more liable to absorb poisonous material than the uterine cavity itself, and hence vaginal irrigation, only, will often prove sufficient. As an illustration of this, the writer will append a condensed statement of a case furnished by Dr. N. Senn, of Milwaukee. Patient a primipara of twenty-eight years; labor tedious, and completed by forceps in the hands of a skillfull accoucheur; child born healthy; considerable hæmorrhage after placental delivery; Dr. S. saw the patient four days after, in consultation; she had had a chill two days before, and slight chills afterward, with high temperature and profuse sweating; when he saw her the pulse was 120, temperature 102½° F.; the labia, vaginal wall, and cervix, on the right side, were found deeply lacerated, and the wound filled with coagulated blood, the vaginal discharge very offensive, and the right para metrium exceedingly tender; anti-pyretic doses of quinine had failed to control the temperature; constant irrigation was advised, and performed by means of a rubber tube attached to a fountain syringe, and inserted into the vagina, so that the upper extremity reached the highest point of the wounded surface; the reservoir was suspended above the patient's bed, and the rubber tubing secured in place by strips of adhesive plasters; a solution of 5 parts of salicylic acid, 100 of rectified spirits of wine, and 895 of pure water, kept at the temperature of the body, was allowed to slowly flow through, making its exit into a bedpan, which was changed when necessary. About two gallons were used daily. The temperature fell the first day to 100° F.; the irrigation was continued four days; the wound assumed a healthy appearance, and the patient rapidly recovered without an untoward symptom.

At the meeting of the New York Academy of Medicine, April 26, D. R. Tauszky read a paper[1] upon treatment after parturition, in which he advised, for the relief of offensive lochia, accompanied by fever, syringing the vagina several times a day with a disinfectant solution, and thought uterine injections unnecessary, save in cases of internal violence, such as attend manual separation of the placenta or use of the forceps. When they are deemed necessary, prefers thymolized or simple water to carbolized water.

In a discussion in the New York Academy of Medicine, April 26, the opinion seemed quite general that septicæmia in the majority of cases originated in wounds of the vagina and cervix. Dr. Chamberlain remarked that a breach of surface anywhere in the genital canal might be causative; but "he did not deem the existence of septicæmia an indication for washing out the uterus, unless the cause could be located within that organ, though it might be an indication for washing out the vagina." Doubtless the retention of decomposing material within the uterus is, at times, the cause of septicæmia, and if the vaginal irrigations do not speedily reduce the temperature, intra-uterine irrigation may be needed. For this purpose, however, the writer believes that a very weak antiseptic solution, or even water alone, is all that is needed. The results recorded by Dr. E. Hervieux,[2] of Paris, thirteen years ago, in cases of hospital puerperal fever, seem to confirm this view.

While writing, an article by Dr. T. G. Thomas,[3] lately published, has attracted attention from its bearing upon this subject. Two severe cases of puerperal septicæmia are detailed, in which uterine injections of carbolic acid were employed; but this part of the treatment not commenced until there had been time for a full development of the autogenetic poisoning. Two days were lost after the first manifestation of the disease in the first case, and five or six in the second, before Dr Thomas saw them and commenced this treatment. The second case died twenty-four hours after. The first, a primipara, had a short and uncomplicated labor. The nurse was directed to syringe out the vagina carefully, the next day, with carbolized water, which was done. About thirty-six hours after labor the temperature was 101°, twelve hours after this 102.°5, the succeeding morning 103°, no chill having occurred, but some pain in the right iliac fossa; the same evening the temperature was 106.°5, the pulse 145. This was the condition when Dr Thomas saw her. He found a bilateral cervical laceration reaching to the vaginal juncture, and directed washing out the uterus with carbolized water. This was carried out by two physicians, who remained with her during the night, every four hours, by means of a Davidson's syringe and Chamberlain tube. The next morning the pulse had fallen to 120, and the temperature to 101°. She felt much

[1] *Medical Record*, May 26, 1883.
[2] *Traite Clinique et Pratique des Maladies Puerpèrales*, Paris, 1870.
[3] *New York Medical Journal*, March 31, 1883.

better, but had taken opium freely all night. The uterus was now washed out at longer intervals, but the temperature again rose, and again the injections were resumed every three hours. Opium was also freely administered, ten grains of quinine given every eight hours, and rubber tubing, through which a current of ice water ran, was also placed over the abdomen. The injections were continued two days, and then stopped; the temperature again rose, and they were resumed. On the thirteenth day after this treatment was commenced the intervals between the injections were made longer, and they were gradually discontinued. Is there any evidence here to show what influence the carbolic acid had in the result? We see that very active medication of another character was resorted to, and we are not informed of the strength of the injections, or whether the quantity of fluid was sufficient to thoroughly cleanse the uterine cavity, so that the fluid ran out clear at the close of the procedure. A syringe was used, not steady irrigation, and it appears doubtful whether this result was fully attained. The temperature and pulse improved after each injection, and we might suppose that the carbolic acid aided to produce this effect, had it not been observed again and again, as a result of simple cleansing, when no acid was used. It appears to the writer that the poison which had already been absorbed before the injections were begun, continued to produce its effects in the organism, more or less influenced by the powerful medication employed; possibly increased, or renewed by the frequency of the injections; certainly only modified, as far as their influence was concerned, by the imperfect washing away of the uterine contents. It is very probable that in this case the seat of absorption was the lacerated cervix, and that constant irrigation of this region, earlier begun, would have produced speedier and more decided results.

Dr. Thomas' conclusion from this case is, that puerperal fever should be treated upon as simple a plan as septicæmia of any other kind, viz.: by washing out with some antiseptic fluid the surface where the disease originated. In his language: "With some fluid which will remove the poisonous material which is being absorbed, and also, *as far as possible neutralize its poisonous qualities.*" The last part of this sentence intimates a doubt as to the possibility. Is there any evidence that an antiseptic agent can be safely used of such strength as to destroy, or neutralize, a formed poison in the tissues or cavities in the body? We know that they can be so used as to prevent the formation of such poisons, but it is necessary that this influence should be constantly present and in action, and not pass away with the morbid products which are removed by injections or irrigations. In the latter case the writer can see no cause for the relief except in the *removal* of the poisonous material.

The case is quite different with the treatment advocated by Dr. Alloway, of Canada,[1] who reports, recently, three cases of puerperal septicæmia which he treated by first washing out the uterine cavity with plain or carbolized water, and then, by means of a Sims' speculum and a tent insertor, passing a suppository of iodoform of ten, fifteen or twenty grains to the fundus uteri and leaving it there. He usually employed this procedure night and morning, and had observed no poisonous or unpleasant results.

By the use of this agent in this manner, a constant antiseptic influence is generated which should prevent the development of poisons, if it can be used safely in sufficient quantity.

Similar in operation, and less liable to objection, is the effect of the oil of eucalyptus globulus, so much lauded by Dr. Sloan[1] as a preventative of septicæmia, when it is to be feared, on account of lesions in the parturient canal from forceps or any other source. He employs it in the form of suppositories, consisting of oil of eucalyptus two parts, white wax one part, ol. theobroma two parts. Each suppository contains about twenty minims of the oil. He states that it is neither poisonous or irritating in this quantity, does not coagulate the lochia, its odor is agreeable, and it appears to aid in uterine contraction. Mr. Lister has also stated that this germicide was entirely devoid of any deleterious effects.

The conclusions which the writer thinks can be legitimately drawn from what has been presented, are, that the danger of auto-genetic poisoning after ordinary labor in private practice is not such as to demand the routine precautionary minutiæ which Dr. Barnes has suggested; that very many cases in which the lochia are offensive, are attended with, and followed by, no disturbance; and that cleanliness as thorough as can be attained, and care as to the general condition of the patient, are only usually necessary. That even in cases where rise of pulse and temperature occur, vaginal irrigation is frequently sufficient. That in cases where relief has followed the use of carbolized injections, vaginal or intra-uterine, the advantageous results do not so much depend upon antiseptic virtues as upon the cleansing effects by even a simple fluid, used in such manner and quantity as to secure entire removal of any decomposing matters retained in the uterine or vaginal cavity.

That when there is reason to apprehend absorption of morbid material by existing vaginal or cervical lesions, the suppositories of ol. eucalyptus are much preferable to carbolic acid syringing, though they may be advantageously preceded by vaginal irrigation. That if these means should not avert a rise of pulse and temperature, continued irrigation of the parts affected, by a weak solution of Condy's fluid, salicylic acid, or some similar agent, should be employed. If these do not soon lower the temperature, or if the seat of absorption appears to be located in the uterus, intra-uterine irrigation of the same character may be adopted, to the extent of washing away all decomposing material. When antiseptic intra-uterine action is clearly indicated, the introduction of iodoform suppositories will accomplish everything additional that can be done locally, in the present state of our knowledge of the subject.

[1] *Canada Medical Review*, March 17, 1883.

[1] *Med. and Surgical Reporter*, March 17, 1883.

PLACENTIA PRÆVIA.

The report of M. Hoffmeier, of Berlin,[1] upon this subject, deserves notice from its unusually favorable maternal results. He cites forty-six cases, thirty-five of which occurred in one year. Three of these were so near death from hæmorrhage when first seen that there was no opportunity for treatment. Of the remaining forty-three, six were treated by the waiting method and the tampon; in the other thirty-seven no tampon was used. Of the six treated at an earlier date by tampon, one died, two had a long and severe illness, and four of the children were dead. Of the thirty-seven others treated differently, one mother only died, and she had been treated by the tampon for twenty-four hours, and the placenta was offensive when delivered.

This is a maternal mortality of 2.7 per cent., which is much less than any previously published rate. The results for the children, even with no hurried delivery, were: Seventeen already dead, three died from perforation of the placenta, and three were premature—giving 37 per cent. of the whole living, which reaches the usual standard. The placenta was located centrally in nineteen, laterally in sixteen, marginally in eight.

In central insertions he favors perforation of the placenta and bringing the feet through. This was done in five cases, in three of which it was necessary on account of the urgency of the symptoms, and two in which the child was already dead. His practice is to wait until some symptoms of labor are present, in the shape of uterine contraction or a funnel-shaped dilatation of the cervix, then as early and actively as possible proceed to deliver. The earlier this is done the more easily version, by the combined external and vaginal method, (one or two fingers in the os,) can be effected. This version was practiced whenever possible, and the hand introduced into the uterus only when absolutely necessary; the feet having been guided to the os and there seized, firm traction made, and the hæmorrhage effectually stopped by the buttocks. This was done in thirty cases. In six—three of which were breech presentations—internal version was used, and in one, a head presentation, forceps applied. After bringing the breech into the uterine opening, the rest of the delivery should be slowly accomplished. The condition of the child may modify this rule, but must not increase the mother's risk. He says: "One must have the courage to let a doubtful child's life be lost in his hands, rather than subject the mother to an increase of danger."

He states that hæmorrhage occurred after delivery in some cases, although ergotine was given, subcutaneously, during extraction. This was easily controlled by ergotin and iced or hot water injections.

Such maternal results are certainly worthy of attention, for Mueller estimates the total mortality in such cases at not less than thirty-five to forty per cent., and Lusk states that as many as one in four die during or shortly after delivery.

Dr. E. L. Partridge, of New York, has recently reported[1] four cases of this affection, in three of which labor was induced, at full time, by the use of Barnes' dilators, in the other labor occurred spontaneously. Internal version was practised in three of the cases, the fourth, a head presentation, was delivered by the forceps, the child being probably premature, was still born. All the mothers recovered, and two of the children were saved. The relator objects to tampons, and deems the rubber bags safer and more efficient. He states that the cervix is usually soft and easily dilatable, but uterine action does not follow to the same extent as after the dilatation of a healthy cervix; the contractions are generally insufficient to drive the head firmly down, if it presents, and the use of the forceps is difficult, from the necessity of avoiding the placenta, and often from the length and thickness of the cervix; hence, almost without exception, turning is preferable As associated with the treatment of this condition, a new method of plugging the vagina may be here mentioned, which Dr. Chassagny, of Lyons, recently described to the Paris Academy of Medicine.[2] He states, that he had made use of it in two cases of abnormal insertion of the placenta, with the effect of inducing premature labor without hæmorrhage. The apparatus consists of a bladder to which a rubber tube is firmly attached. The empty bladder is introduced into the vagina, and a syphon is then connected with the tube, which allows a flow of water into the bladder from a vessel placed about two and a half feet higher than the pelvis of the patient. To prevent the expulsion of the bladder a cylindrical speculum is introduced after it is in place, which is forced out as the water enters. The act of distension separates valves attached to the sides of the speculum, which by resting upon the internal surface of the vaginal opening, occlude the outlet and prevent expulsion. The pressure of the full bladder causes abundant secretion, and soon induces rapid dilatation of the os and energetic uterine action. It is also stated that, in cases of post partum hæmorrhage, when this apparatus is introduced into the uterus and distended, it closes the uterine sinuses and determines uterine contraction, which occurring, the water is allowed to flow out slowly, until the organ is fully contracted.

Part II.

Dysmenorrhœa.

A few remarks concerning a painful female affection, which we are all, and often, called upon to relieve. Our object is not to enter upon a full discussion of the etiology of dysmenorrhœa, but to question the causative influences of some conditions supposed to produce it, to suggest the close alliance of many of its ultimate determining causes, and allude to some methods of local treatment.

Anteversions and flexions have not only been shown by Fritsch, of Breslau; Vedeler, of Christiana; Herman, of London, and others, to be generally normal conditions; but both these and stenoses, once deemed principal factors in the production of this affection, are proved to rarely exist to such a degree as

[1] *American Journal of Obstetrics*, Supplement, November, 1882.

[1] *New York Medical Journal*, December 1882.
[2] *British Medical Journal*, March 3, 1883.

to prevent free egress of the menstrual fluid. They are not present in many instances of painful menstruation, and where either, or both, do exist, they are not necessarily attended by it. We may fairly assume that, although at times factors in the production of dysmenorrhœa, they are so only quite exceptionally, and, as Dr. Macan remarks, "we must look elsewhere for the cause." Perhaps we may gain a clearer idea of the usual nature of this affection, not only by reviewing some of the morbid conditions and states which have been assigned as causes, but by also noting the treatment which has proved effective, and deducing thence the character of the abnormal conditions which such measures would be reasonably supposed to relieve.

Mr. Clement Godson,[1] of London, in some remarks, about two years since, upon what is called spasmodic, or obstructive dysmenorrhœa (though he doubted the obstruction, and prefers the former term), says: "It seems tolerably certain that the most sensitive part is the so-called internal os, that portion of the uterine cavity which merges into the cervical canal. I cannot explain the pathological cause why this part is so hyperæsthetic. I know, however, that the morbid sensibility can be overcome by the passage of metallic bougies." This treatment, in his hands, used about midway between the menstrual periods, was quite successful; though in some cases the difficulty returned, and he was obliged to resort to the introduction of intra-uterine silver stems, which proved curative.

This same method, the introduction of metallic bougies, was also employed quite successfully by Dr. Mackintosh, of Edinburgh, as early as 1836. His theory was that of obstruction, although he remarks, "I believe it may sometimes depend upon inflammation of the lining membrane of the uterus, as well as inflammation in the substance of the cervix, and on the encroachment of tumors diminishing the calibre of the outlet."

Dr. Godson, after advancing valid reasons for not believing obstruction the cause of the difficulty, and yet regarding it as curable by dilatation, asks the pertinent question, "How does the dilatation relieve the dysmenorrhœa?" In reply, he remarks, I have already suggested that the pain seems due to spasm, which, at the approach of the menstrual flux, seizes upon the uterus, the endometrium of which is in a state of hyperæsthesia. The contact of a foreign body like a bougie or dilator seems to increase the morbid sensibility at first, but as the structures become accustomed to its presence, the spasm subsides. The impression left upon the endometrium, after the withdrawal of the bougies, is such as to render it less sensitive and liable to spasm. How is this explained? This he does not attempt, and it would be difficult upon the assumption that hyperæsthesia alone was the condition of the cervical mucosa. The beneficial action of the bougies would, in this case, always be transitory. But assuming hyperæmia to exist, and to cause, or at least aggravate the hyperæsthesia, an attempt at explanation can be offered. The pressure produced by bougies. tents, intra-uterine stems, dilators, etc., would not only lessen the hyperæsthesia, but effect, by frequent or prolonged pressure, a change in the hyperæmic condition, by producing absorption, or other nutritive modification of the tissues, and thus restore the lining membrane to a normal condition. This idea is in harmony with the results secured by such remedial agents. Dr. Munde says that for temporary relief he employs Ellinger's dilator; but for permanent cure, tupelo tents. The latter, by their prolonged pressure and contact, naturally produce more effective modification in the tissues.

What is the nature of the pain in dysmenorrhœa? The spasm induced by the disordered condition of the lining membrane, which was accepted by Dr. Godson, might have led him to the conclusion arrived at by Dr. C. D. Palmer, of Cincinnati[1], who regards dysmenorrhœa as essentially a neurosis. The writer fully accords with this opinion, and, if he understands Dr. P.'s remarks correctly, also with the view that in some cases this neurosis is a result of general health disturbance, of neurasthenia, anæmia, want of developement, etc. These often find relief from change of climate and surroundings, or other agencies which improve the general condition; but in other, and perhaps the majority of cases, the neurosis is the consequence of the abnormal condition of the endometrium, the mucous membrane of which is turgid, or hyperæmic, and "its sentient nerves in a state of hyperæsthesia," as a result. Even in cases where shreds are discharged the pain is still neurotic, though the false membrane acts obstructively in producing it. The most plausible explanation of the origin of this latter form, is that of Dr. Reamy—that the membrane is not a product of inflammation, but a normal one, that is usually removed by undergoing gradual change through fatty degeneration, and then forms the debris of the menstrual discharge. This solution and disintegration of the membrane is prevented by lessened vital activity, and consequent failure of the normal nutritive ehanges. This is also the view of Williams and Aveling.

Professor Heinrich Fritsch, of Breslau, in a recen article[2] upon dilatation of the os uteri, etc., ascribes dysmenorrhœa, in the large majority of young women, to a dilatation and hyper-secretion of the muciparous glands. To facilitate the passage of this over-secretion he dilates the external os, or makes small crucial incisions, snipping off the little lobes thus formed, and then employs free irrigation of the uterine cavity with weak disinfecting solutions for one or two weeks, for the purpose of reducing the over-action; he also dilates the internal os if not already patent. He speaks of other cases occurring in parous women as well as in virgins, and, although he considers most cases of this affection as of complicated origin, states that he has both temporarily and permanently effected cures by a single, and by repeated, use of his dilators.

The local agents which have been mentioned, whether mechanical or medicinal, appear to have produced their beneficial effect by acting upon the

[1] Transactions of London Obstetrical Society, 1881.

[1] *Cincinnati Lancet and Clinic*, April 8, 1882.
[2] *American Journal of Obstetrics*, February, 1883.

cervical and uterine mucosa. When the bougies or stems fill the cervical canal they cause a determination of blood to the part; so much is this, at times, the case, that in the use of the stem pessary it has been asserted that some bleeding, or even a free discharge, is an indication that the application will be effective. To this same alterative effect must be ascribed the relief obtained from local excitant or mildly caustic applications to the uterine mucosa. Dr. Fordyce Barker stated, a few years ago, that he had cured cases of membranous dysmenorrhœa by dilating the os and modifying the condition of the uterine lining membrane by the introduction of pencils of iodoform.

There is another agent, which, from the experience recently published of its results, as well as from its success in the hands of the writer, appears better adapted to produce the nutritive changes in the endometrium necessary for the cure of this affection than any generally employed.

Dr. I. D. Mann says, upon this subject,[1] "The old-fashioned term, neuralgic dysmenorrhœa, still expresses all that is known of the causation of many cases. There is also often an irritable condition of the mucous membrane of the uterine cavity, which, under certain circumstances, evokes painful uterine contractions. In such cases electricity affords great relief, probably by modifying nutrition, and from the direct action of the current upon the terminal nerves. The anode is carried into the os, and the cathode applied over the ovarian regions. If ovarian neuralgia exist it can be relieved by placing the anode over the ovary and the cathode over the lumbar spine. It is inadmissable in ovaritis proper, but tenderness, with slight enlargement and absence of systematic disturbance, is probably due to passive hyperæmia, and is often quickly relieved by the same means. The relief in simple ovarian irritation is speedy and very decided."

Dr. J. S. Rockwell[2] speaks very decidedly of the beneficial effect of galvanism in what he terms spasmodic dysmenorrhœa, and, in cases where great tenderness of the os uteri and the neighboring vaginal walls existed, he ascribes the satisfactory results to the influence of this agent in relieving spasmodic muscular contractions of the os. The results are undoubted, but the writer thinks the action of this agent far more comprehensive. It brings relief, not only by removing the spasmodic action, but, which is of much more importance, by also modifying the disordered conditions which underlie the neurotic disturbance. This is probably effected by what Remak calls the catalytic action of the current.

Over thirty years ago the writer treated dysmenorrhœa upon the stenosis principle, with fair success by dilatation; farther experience convinced him that it was not the narrowness of the passage which lay at the foundation of the difficulty, and experimenting first with faradism and later with galvanism, he ascertained that even better results could be attained without any pressure upon the mucosa of the uterine neck. No record has been preserved of the cases thus treated, they weremany, extending over a period of at least thirty years. Faradism, with a moderate current was found efficient, but preference in most cases was given to galvanism; the covered anode is placed usually over the region of the lumbar vertebræ, at times over the pubis or ovaries, while the cathode, connected with an insulated sound is applied to, or carried into the uterine os; the current should not be strong, from 8 to 10 cells of a Bartlett or Fleming battery, never sufficient to produce pain or anoyance, and occasionally reversed. The sittings, from twenty to thirty minutes, should be repeated at intervals of three to five days between the menstrual periods, until a week before the expected return, then daily for four or five days. After a few applications, the next menstruation will sometimes be attended with less pain, and if continued regularly, the second nearly or quite painless; usually, however, a longer use is required, and in cases of long standing the treatment must be quite protracted. Positive proof is wanting that membranous dysmenorrhœa has been cured by this method, in the hands of the writer, but he feels quite assured, from the description of the discharge, that this was effected in some instances.

The deductions which the writer thinks may be made, are, that dysmenorrhœa is a neurosis, sometimes resulting from derangement of the general health, and especially that of the nervous system, but more often due to morbid conditions of the lining tissues of the cervix and uterine cavity, which differ rather in degree and extent, than in character or location (always excepting those caused by virulent infection) and which vary from simple hypersecretion of the muciparous glands, to hyperæmia and hypernutrition of the endometrium and escu of the uterine tissues.

In the former cases medical and hygienic measures are most essential; in the latter, the morbid conditions are relieved in the earlier stages by mechanical agents, the pressure from which produces a change in the nutrition of the affected parts, and in this stage as well as in some more advanced, by local applications which act upon the same principle and produce a like result. That faradism and galvanism not only relieve spasmodic action, but the latter especially is curative by the power it possesses, when properly and perseveringly employed, to effect such favorable changes not only in the uterine mucosa, but in the submucous tissues, and even in the parenchyma of the uterus itself, as render it a most efficient means of cure in this affection.

THE APPLICATION OF ELECTRICITY TO GYNÆCOLOGY.

Although the effects of electricity in some of its forms have been already mentioned, as a method of treatment in pelvic affections, and its manner of use partially described, the recent indications of a better recognition of its value, and of an increased disposition to investigation of its various powers, will perhaps warrant a few more remarks.

We fully agree with Professor Erb,[1] when he urges "the more extensive utilization of a curative agent which has gained for itself a permanent position, and the effect of which, for manysidedness, energy, and

[1] *London Lancet*, July 23, 1881.
[2] Lectures upon Medical Electricity, 1881.

[1] *Handbuch der Elektrotherapie*, Leipzig, 1882.

reliability, are not surpassed by any remedies with which we are acquainted."

In regard to the explanation of its action, we have, at present, little more than hypothesis. After discussing different theories, Prof. Erb concludes that our main task should now be to discover the therapeutical resources of this agent in a somewhat empirical manner, as our knowledge of the precise method in which the unquestionable therapeutic results are attained is still defective; and it is premature to limit its use, or always endeavor to make it accord with physiological premises, while we know next to nothing of the molecular disturbances of nutrition.

Professor Dujardin Beaumitz, of Paris,[1] in a lecture recently given, after speaking of the action of galvanism upon the nervous and circulating systems, touches upon the important physiological effects which we may expect to obtain from it in pelvic affections, when he writes: "Under the influence of continued currents, nutrition is seen to improve, and the vitality of tissues is restored with new energy. Although we have no absolutely scientific explanation of this effect upon nutrition, it results probably from a double action. First—that directly exerted upon the trophic nerves; second the action upon the tissue molecules of the organisms whose vital energy is increased." Remak has called this a catalytic action, to distinguish it from the electrolytic, which is destructive, by producing solution of the tissues, while the former promotes circulation and absorption by dilating the walls of the blood-vessels.

The rules for selection of the different forms of this agent for producing the best effects in varied conditions, are not fully settled. The directions of Prof. Beaumitz are brief and practical, and are based upon experience: "When we desire to modify cutaneous sensibility and nutrition in general, we make use of static electricity; when we seek to limit the action to a group of muscles, or to restore contractility to certain muscles, we use Faradism; when we wish to modify the molecular action of certain nerves, or give new activity to certain tissues, we employ the galvanic current."

A fact is recently stated to have been determined by careful experiments made by Professor Ziemssen,[2] viz: that the induced current has no influence whatever upon the frequency of force of the cardiac contractions, while the continued current most distinctly affects them. This is of practical importance, especially in case of threatening death from chloroform.

The rules just quoted are, of course, general, and only experience can teach, in our present state of knowledge, which particular form is best applicable to each case. The writer's deduction, from his own use, would be, that galvanism is more generally indicated for gynæcological use, although Faradism is efficient in some conditions. Static electricity, made recently more available by improvements in the instrument, does not promise to be as directly useful to the gynæcologist, except as an adjunct to general tonic treatment. It has been used, however, efficiently in amenorrhœa by Golding Bird and others many years since. Dr. Blackwood, of Philadelphia, has made use of it as a galactagogue, and states that it is the only form from which he has obtained beneficial results in agalactia.

In regard to the strength of the current used, as well as the frequency and duration of the application, there is considerable difference in the practice of operators. They of course must vary in accordance with the affection treated and the result desired. As a general rule, unless for the check of post partem hæmorrhage, a medium current is sufficient to produce pain or disturbance, and employed daily, or once in two or three days, for twenty or thirty minutes, is preferable, for gynæcological use, to a more powerful application for a shorter time. Dr. W. O. Stillman, in a recent article,[1] commending the general tonic effects of galvanism, remarks that its best effects are often not realized from using a too powerful current, and that in nearly all classes of cases he has observed the best results from decidedly weak ones. This is also the conclusion of Drs. Beard and Rockwell, and the writer's experience is similar.

The successful employment of these agents in extra-uterine pregnancy and dysmenorrhœa has been already noticed. Galvanism is also efficient in uterine subinvolution and its results. This condition has recently attracted attention as the cause of subsequent and serious uterine derangements.

We can only recognize the physiological change occurring in involution, by the gradual and nearly regular diminution in the size of the organ. When normal, according to most authorities, the uterus cannot be felt above the pubis after the tenth day, and the time necessary for the entire removal of the old tissues and their replacement by new material is estimated by A. Serdukoff, of Moscow, as eight to ten weeks. The frequency of subinvolution may be inferred from statistics similar to those presented to the British Medical Association by Dr. J. Williams.[2] He stated that of 113 deliveries in one year at the London lying-in hospital under his charge, only ninety might be considered as normal in involution at the twelfth day; that is, the uterus had then retired into the pelvis; but this does not necessarily ensure subsequent normal progress. He thinks hæmorrhage, dysmenorrhœa and prolapsus are often results of imperfect involution.

The causes retarding or checking involution are both general and local. The former can often be beneficially treated before as well as after labor. Some of the latter, as retained portions of placenta, or membranes, rents in the perineum or cervix should receive early attention, and will not be here considered. Dr. Williams says: "The prevention of subinvolution means three things: an empty uterus, a well contracted uterus, and the absence of fever." An empty uterus being secured, the indication is to produce and perpetuate normal uterine contraction. For this purpose the claims only of electricity will be now noticed, as it promises the best results, not only in the early stages, but even in the later and more confirmed conditions of uterine-hyperæmia and hyperplasia.

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[1] *Boston Med. and Surg. Journal*, April 12, 1883.
[2] *New York Medical Record*, January 6, 1883, page 16.

[1] *Medical and Surgical Reporter*, April 21, 1883
[2] *British Medical Journal*, September 2, 1882.

Its action is both local and general; and in this, as well as in many other affections where galvanism has been beneficial, the result may be ascribed not only to the favorable nutritive changes effected in the uterus, but also to its tonic power in improving general nutrition.

At a meeting of the Paris Academy of Medicine, a little more than a year since, Dr. George Apostoli read a paper in which he proposed the use of the Faradic current in all cases of labor, immediately after delivery, for the purpose of producing more thorough uterine involution and averting engorgement or metritis. In cases of normal and full-term labor, he employed it eight or ten times within about six days. In difficult or premature labor, it was continued longer. In thirty-two cases he had found it always harmless, its effect being invariably calming and sedative. It hastens convalescence by securing more rapid and perfect involution, reduces the amount of the lochial discharge, and prevents uterine deviations; but Faradism is not the best agent. Dr. Paul Helot, in November, 1881,[1] states, among his conclusions from trials of different forms of electricity, that uterine contractions can be produced by a Faradic current when the interruptions are very rapid, but that the process is painful, and should be restricted to the treatment of post partum hæmorrhage; that galvanism with the constant current, interrupted, is the best method, the pain being very slight, and the catalytic action adding to its value.

The testimony of a competent observer, Dr. J. D. Mann,[2] shows that galvanism will not only secure full involution in an empty uterus after labor, but also that in cases of subinvolution of some duration, it will effect more than any other agent in reducing and removing hypertrophy. He says, in reference to this condition: "It should be treated in the early stage, for when prolonged hyperæmia has produced hyperplasia of the areolar tissue, and the stage is reached when an excess of fibrous tissue preponderates over the muscular elements, absorption becomes a matter of grave difficulty." Again, "In dealing with an hypertrophied uterus, composed of muscular fibers infiltrated with fluid, but sparingly so with cellular growth, any method of treatment which will stimulate the nutrition of the organ, and accelerate the absorption of the morbid products, tends to promote a cure, and such is galvanism." He introduces into the uterus an insulated sound, connected with the cathode, placing the anode over the lumbar spine; a moderate current, 90 dix millevebers, is passed from ten to twelve minutes every alternate day, the current being stabile for the first half of the time, and during the last, interrupted at intervals, the strength being then reduced. The patient should remain in the horizontal position some hours after each application. If the uterine wall is so soft as to make the passage of a sound dangerous, a cervical electrode is substituted. He states that in a case recently treated, each application was followed by a temporary discharge, and slight pains of the after-pain type. The uterus was reduced to its normal condition in seven weeks.

Dr. Paul F. Munde, of New York[1], states that he has frequently used the galvanic current to reduce the hyperplastic uterus and bring on the menstrual flow; also, that in a case of large cellulitic exudation in the right pelvic fossa, which produced severe sciatica by its pressure upon the sacral plexus, galvanism, vaginal and post-trochanteric, cured it permanently in less than a week. The same author, in another paper[2], after mentioning the varied and usually unsatisfactory treatment of uterine displacements, says: "Electricity rationally and scientifically employed for a sufficiently long time, offers chances of cure in cases comparatively recent, which call for a more thorough and persistent trial." Still later, before the State Medical Society of New York, last January[3], speaking of cervical erosions and their treatment, he says: "In a few intractable cases I have found the negative pole of a galvanic battery applied by a round button to the erosion, the positive sponge being placed over the abdomen, produce a marked tendency to cicatrization. In one such case, grafting of healthy mucous membrane upon the denuded surface occurred to me, but the galvanic current finally effected a cure."

Dr. Frank P. Foster, of New York[4], has used it with relief in oöphoralgia, and concludes an article thus: "The three great remedies for chronic extra-uterine inflammation, are hot water, iodoform, and galvanism." In a private communication he states that galvanism has appeared to hasten the absorption of pelvic exudates, and that in some cases, where great tenderness existed, it has been the only local measure he has found that did not add to the patient's discomfort for the time being; that in pure ovarian pain, apart from inflammatory conditions, he has generally found Faradization more useful.

The writer would add that he has found Faradization and galvanism very useful in amenorrhœa, where general anæmia was not present, and even when the latter existed, and constitutional treatment was obviously required, has found them valuable adjuvants. He has also used galvanism with advantage in cases of cervical and uterine catarrh, and recalls one of long standing, where the beneficial effect was very marked.

We have yet much to learn of the influence of this agent, even in the conditions which have been relieved by its employment, and still more concerning its, until recently, almost unrecognized power of producing favorable modifications in diseased organs and tissues, independently of any electrolytic or destructive action. It certainly deserves attention, investigation, and more careful and thorough trial than has hitherto been accorded.

In the beginning of this paper a reference was made to the recent brilliant advances in gynæcological surgery. Prof. Heinrich Fritsch, of Breslau, begins an article upon uterine therapeutics thus: "The general surgical teaching of recent years forces gynæ-

[1] *American Journal of Medical Sciences*, January, 1882.
[2] *London Lancet*, July 23, 1881.

[1] *Am. Journal of Obstetrics*, October, 1882.
[2] *Am. Journal of Obstetrics*, October, 1881.
[3] *Medical Record*, February, 1883.
[4] *New York Medical Journal*, March, 1882.

cologists, also, to employ uterine surgery more and more, in place of *medical* gynæcology."

Dr. Angus McDonald says:[1] "We live in times when thoughtful gynæcologists cannot avoid feeling that a tendency to a too frequent resort to surgical and instrumental methods in dealing with woman's diseases is widely, and not infrequently disastrously, present." These are utterances seasonable and pregnant with meaning.

What is to be most earnestly sought by us in the future? The notable success which has attended operative gynæcology, since Lister taught the use of carbolic acid, and, by implication, of perfect cleanliness, has had a tendency to call attention away from the less demonstrative, but even more important, investigation of constitutional as well as of local medical methods. Is there not great danger that the patient search for therapeutic resources, general, local, hygienic and all others, which it should be our aim to undertake, will be comparatively neglected?

A successful and brilliant surgical procedure is very attractive; but is not a resort to mutilative surgery, though a great boon to humanity in our present state of knowledge, an avowal of ignorance, or of our inability to cure? While we hail gladly any advance in our surgical art and in the devices for lessening its mortality, we should not forget that, were our attainments in knowledge more thorough and perfect respecting the causation of diseases with which we have to deal,—were our skill in early diagnosis and treatment more sure and extensive, such disordered condition might be arrested and cured before reaching that stage which can only be relieved by the knife of the surgeon.

Our grandest aspirations should lead us to the study of the underlying morbid processes which *precede* graver deviations from the normal state in the pelvic organs. Our endeavor should be to forestall and prevent the latter, not only by rational therapeutics, but by teaching conformity in daily life with nature's laws. "Obsta principiis" should be a motto in medicine as well as in morals.

Woman has in action, for a period of about thirty years, a set of organs upon which depend the perpetuation of the race. At the time these organs begin their functional activity, the greatest care is requisite both physically, mentally and morally to secure to them freedom from injurious influences, and that proper balance of development, which shall fit the woman for her after duties. Here is work in preventive medicine for the gynæcologist, if he be, as he should be, also physician, of the most important character. At the very threshold of female life a thousand dangers beset the neophyte. To those resulting from climate and constitutional proclivities, are added, in our artificial life, the exactions of the tyrant fashion, in dress, habits and manners, with all their attendant dangers. It is here the physician alone, who, by instruction, warning and admonition, may exercise some influence in restraining and correcting habits and influences, which may render after life but a scene of illness and suffering.

The necessity of careful constitutional treatment in pelvic disease has often been urged, but does not receive the attention its importance demands. Specialism, when exclusively practiced, is apt to produce narrowness of view, its efforts for cure to be only a variation in local treatment rather than a careful study of the relations existing with functional disturbances elsewhere, which influences, if they do not produce, will intensify the local troubles. Especially is this the case with those educated as specialists "ab ovo." No one who has not received thorough training in general medicine, and has not tested, confirmed and enlarged the knowlege thus attained, by many years of general practice, is fitted for a specialist.

The human body is an entity, not a mere collection of organs. We must consider not only the local expression of trouble in the pelvis, but aim to fully understand and appreciate the relations of the various parts of the organism; to investigate the influences which general disturbances, neurotic, functional or organic have upon the generative system; which influences are sometimes primarily causative, but more often come into action when disordered parturition, or some other deviations from normal function occur. We hail everything which aids to enforce the usefulness of such studies as a harbinger of onward progress.

Such has been the tendency, for some years, of the utterances of Dr. Fordyce Barker, whose able paper, of last autumn, upon the constitutional origin of leucorrhœa, and the cure of its resulting local lesions by rational therapeutic and hygiene measures, should be thoughtfully read and re-read by every gynæcologist

A paper has been recently published, by Dr. L. C. Boisliniere, of St. Louis, which, in no uncertain tones, calls attention to general conditions as causative in pelvic disease, closing by the statement that our extreme tendency to specialize has led us to attach too much importance to pelvic lesions, and too little to the general condition. In the same direction was also an address of Dr. William Goodell, of Philadelphia, which shows that many affections of the "reproductive apparatus" are merely local expressions of their cause, general neuroses.

Time will forbid dwelling upon this all-important subject. It is only by realizing that the physician is larger than, and must include, the specialist,—that we can progress toward the goal we ultimately hope to reach. All that is new is not progress. We sometimes follow the will-of-the-wisp light of error into devious paths, from which we return, not always enough wiser for the lesson, to prevent again going astray in another direction. True progress in medicine, as in most human affairs, is not usually by a directly onward course, but rather by following a rising spiral curve, which in time brings us again quite near to the point of departure, but upon a somewhat higher plane.

"Experience teaches slowly, and at the cost of mistakes," and through long tentative efforts only, can we arrive at truth. Patient, protracted, arduous labor is necessary. We must

> "Still achieving, still pursuing,
> Learn to labor and to wait."

Like the first Napoleon, we must veto the word im-

[1] *Edinburgh Medical Journal*, July, 1882.

possible, When medical gynæcology is thus studied and practiced, the writer has confidence to believe, with the larger general and local therapeutic and hygienic resources which such research will in time develop, with closer attention to any deviation from normal functional conditions, and with the clearer and surer diagnosis which the future will bring, that the time will come when the present "brilliant triumphs" of the surgical gynæcologist will pale before the achievements of his medical co-workers:

"Kühn ist das Mühn,
Herrlich der Lohn."

DIFFUSION OF ARSENIC THROUGH THE BODY WHEN THROWN INTO THE MOUTH AND RECTUM AFTER DEATH.

BY VICTOR C. VAUGHAN, M.D., AND
JAMES H. DAWSON, PH.C.

Within the past six months there has been tried, in this State (Michigan), a murder case, in which an interesting and important question was presented to the medical experts. The facts of the case, so far as expert testimony was concerned, are briefly as follows:—Mathew Millard was accused of poisoning his wife with arsenic. The lady was taken sick about April 18, 1882. She was seen nearly every day, and sometimes twice a day, by a physician, and twice the attending physician had counsel. The lady had long been subject to uterine trouble (the nature of this trouble does not seem to have been understood by the attending physician). During her illness she vomited frequently, and, indeed, seldom retained either food or medicine. The testimony as to the symptoms manifested was so confused and conflicting that nothing could be made out of it. The attending physician thought she had fever, but he never took her temperature. The lady died May 7. After her death the husband requested the undertaker to embalm the body, so as to preserve it until a casket could be brought from Detroit. The undertaker replied that he did not know how to embalm the body. The husband then asked the undertaker to procure some poison, and he (the husband) would inject it into the body. The undertaker procured a poison (he states strychnine), and the accused claims that, aided by his brother, he injected arsenic suspended in water into the mouth and rectum. He claims to have put about a teaspoonful of arsenic into a teacupful of water, and to have injected one syringeful into the mouth and two into the rectum. The syringe which he claims to have used was an ordinary bulb syringe, with rectal tube attached.

One hundred and five days after her death the body was taken up, and the stomach and rectum placed in one jar, and a piece of the liver and one kidney in another; and the jars were sent to Prof. A. B. Prescott for analysis of their contents. (When the officers came to remove the body the husband stated that he had embalmed it.) Dr. Prescott found in the stomach and rectum together about twenty grains of arsenious oxide, and from his analysis he calculated the amount in the whole liver to be from six to fifteen grains, according to the size of that organ. Later the body was again taken up, and the brain and a part of the muscles of the calf of the leg sent to Prof. Prescott for analysis. In these he failed to find any poison.

The question asked the experts, and the one which this paper considers, was: "Granting that the arsenic was injected into the mouth and rectum in the manner claimed, could it reach the liver and other organs outside the alimentary canal?" This was the main question, and on it the experts were divided. Drs. Kedzie, Thomas, and Vaughan held that arsenic so injected after death might reach any or all of the organs of the thoracic, abdominal and pelvic cavities. On the other hand, Drs, Prescott, Duffield, and Gundrum held that arsenic would not diffuse through the body after death.

This seems to be a new question in medico-legal science, and authors have not mentioned it directly. However, whatever testimony can be found in the books certainly supports the negative of the question.

Having determined to investigate this matter, we made the following experiments:—

A large musk-rat, which had been caught by one of the students, was killed, and about 50 grains (3.24 grams) of arsenious oxide suspended in cold water was injected with an ordinary bulb syringe with rectal tube attached into the mouth and rectum. The rat was placed in a pine box and buried. After twenty-five days it was disinterred and the various organs removed and subjected to analysis, with the results shown in the following table. In this experiment we did not think to weigh the different organs.

Name of Part Examined.	Amount of Arsenic calculated as As_2O_3 found.
Kidneys,	.00095 gram.
Liver,	.01082 ,,
Lungs,	.19252 ,,
Stomach and contents,	.00686 ,,
Large Intestine,	.40339 ,,
Small Intestine,	.10157 ,,
Heart,	.02507 ,,
Brain,	.03960 ,,
Total As_2O_3 recovered,	.78078 gram.

It will be noticed that the lungs contained a much larger amount of arsenic than the stomach. Evidently the larger portion of that injected into the mouth passed down the trachea instead of going down the œsophagus—indeed, the amount found in the liver is larger than that found in the stomach. It is likely that the poison passed from the lungs into the liver. The amount found in the brain is large, but in the musk-rat the bones of the skull are thin in texture, and are not firmly united.

In the second experiment a cadaver was used. The person had been dead between two and three days when the injection was made. An unweighed quantity of arsenious oxide was suspended in cold water, and this was injected by means of a common bulb syringe, with rectal tube, into the mouth and rectum. The body was lain away in a dry cellar for twenty-five days. The various parts, as given in the table below, were then removed, weighed, and subjected to analysis. In dissecting the body it was observed that, although the cuticle had decomposed to a certain extent, the internal organs were firm to the

touch, and remained in a fair state of preservation. This was true of all the parts removed, except the brain, which was broken down to a semi-fluid condition.

The following table shows the part analyzed, its weight, the amount of arsenic, estimated as arsenious oxide, found, and the per cent. of arsenic found in the various tissues:

Name of part taken.	Weight of part. Grams.	Weight of As_2O_3.	Per cent. of As_2O_3.
Right kidney	104	A distinct mirror.	
Left kidney	90	.00703	.00782
Liver	865	.08316	.00961
Lower lobe of right lung	99	.04333	.04376
Heart	370	.02199	.00594
Transverse section of colon	85	.02659	.03128
Rectum	22	1.65000	7.5000
Spleen	48	.00455	.00947
Stomach	300	2.11200	.70405
Brain	1028	.00363	.00030

It will be seen that, while the right kidney contained only an unweighable quantity, the left kidney furnished nearly as large a per cent. of arsenic as was furnished by the liver. We account for this by supposing that on the right side the liver caught up the greater portion of the arsenic passing down from the right lung, while on the left side the arsenic passed on more freely into the kidney. Contrary to what was observed in the experiments on the musk-rat, the stomach of the cadaver contained a large amount of arsenic, and it seems probable that some of the fluid thrown into the mouth passed directly into the stomach. We were surprised at finding the arsenic in the brain, and the query arises, by what avenue did the poison reach this organ? We noticed that, while throwing the fluid into the mouth at one time, when the bulb of the syringe was very forcibly compressed, a portion of the fluid returned through the nose. It is probable that some of the arsenic adhered to the roof of the pharynx and along the nasal passages, and from thence penetrated the brain.

Independently of our work Prof. Kedzie, of the Michigan Agricultural College, has made an experiment on this question, and we herewith quote his results as communicated by him to one of us in a letter.

He says: "One of our students obtained a cat which had been killed a few hours before by a gunshot wound in the head. Under my directions a quantity of arsenious oxide suspended in water was injected into the stomach and rectum, and the cat was then buried for thirty-one days. At the expiration of this time the animal was taken up, the liver, spleen, heart, and kidneys removed without contact with the contents of the alimentary canal, washed with water, and then oxidized by potassium chlorate and pure hydrochloric acid. The residue was reduced with pure zinc and sulphuric acid and the metallic arsenic collected in a glass tube. From two-thirds of the liver twenty-two milligramms of metallic arsenic was obtained, equivalent to .53 of a grain of arsenious oxide for the entire liver. The heart, spleen, and kidneys were treated together, and from them I obtained 13 milligrammes of metallic arsenic.

"There were thus obtained from these viscera 35 milligrammes of metallic arsenic, and if the whole of the liver had been used there would have been 46 milligrammes of metallic arsenic, equivalent to .89 of a grain of white arsenic, obtained from viscera which could have received this arsenic only by post-mortem diffusions from the contents of the alimentary canal. This result is directly opposed to the dictum of the older writers on medical jurisprudence, that imbibed arsenic in the viscera is proof of its administration before death."

It will be seen from these experiments that the arsenic was quite as widely diffused through the body as it would have been had it been administered during life, and had it been the cause of death. These experiments also show that in a case of suspected arsenical poisoning, if arsenic has been introduced into the mouth and rectum in the manner above given after death, the finding of the poison in the various organs mentioned in the table will be no proof that the poison was administered during life and caused death. Now, embalming fluids containing arsenic are quite generally and indiscriminately used. They are used by the physician, by the undertaker, and by others who prepare the body for burial. Some throw the fluid into the mouth or rectum, or both; some puncture the abdominal walls with a trocar and then fill the cavity with the fluid; others simply bathe the body with some soluble form of arsenic, or cover the body with cloths saturated with such a solution; others still inject a solution of arsenic into an artery. The most weighty argument yet urged against cremation is that it may be used as a means of covering up crime; but in a case of arsenical poisoning the use of an arsenical embalming fluid may be employed as a more certain method of covering up the crime than the incineration of the body would be. On the other hand, so long as the present frequent use of these embalming fluids continues some innocent person may be accused of committing murder by arsenical poisoning, and arsenic being found in the body, may suffer an unjust sentence.

In all of these experiments, not only were "chemically pure" reagents used, but these were thoroughly tested for arsenic. The tissues were oxidized with hydro-chloric acid and potassium chlorate, and the metallic mirror was obtained by the modified Marsh apparatus of Chittenden and Donaldson (*American Chemical Journal*, Vol. 2, pages 235 et seq.) In every case the gas was allowed to run from one-half hour to two hours (to prove the absence of arsenic in the zinc and sulphuric acid) before the substance under examination was added.

UNIVERSITY OF MICHIGAN, June, 1883.

THE MEDICINE AND SURGERY OF THE WINNEBAGO AND DAKOTA INDIANS.

BY F. ANDROS, M.D., MITCHELL, DAK.

The following interesting account of aboriginal medical art is just received from Dr. F. Andros,

now of Mitchell, Dakota Territory, but formerly well-known and eminent at McGregor, Iowa. Dr. Andros is said to be the grandson of Sir Edmund Andros, the British governor of New York in colonial times. He is now over eighty years of age, but writes a firm hand, and is still actively engaged in practice. He has lived nearly all his adult life in contact with the Indians. Among the Winnebagoes he was a "great medicine man," and was admitted to the lodge of their secret society, which has its signs and passwords, and is in many respects like some of the secret orders among the whites. Being thus closely intimate with the Indians at a very early day, before they were much modified by contact with civilization, his testimony as to their original medical and surgical methods has peculiar historical value.

EDMUND ANDREWS, M.D.

The Indians' knowledge of anatomy is very limited, and is mostly comparative. They have a name for all the different organs of the body. They have no idea of the functions of the lungs in the oxygenization of the blood, or of the kidneys in conveying off the nitrogenous elements from the system, and yet they know from observation that the suspension of the functions of either will be fatal to life. They are acute observers, as illustration, when a new beaver lodge is discovered, if successful in capturing the mother beaver first, they determine the number of young beavers to be looked for in the lodge. And this they determine by the number of eschars on the ovaria. They have no definite idea of the circulation of the blood, and yet know that the heart is the organ which propels the blood through the body.

As regards surgery, they never amputate.

In large incised wounds, the parts are carefully brought together and secured with sutures of animal sinew. These they remove in six or eight days. The sinew, smoke dried, is not absorbed. Union by first intention is prevented by putting a thin piece of bark between the edges of the wound, believing that the wound should first heal from the bottom. In 1853 I saw an Indian stabbed, the knife entering the lung. I dressed the wound;and had union by first intention. A few days after I saw the case again, and found the wound had been opened and air was again bubbling from it. Another case: The abdomen wounded with a knife, bowels protruding; replaced the bowels; union complete the next day. Three or four days later the wound was opened. Both patients died, victims to their ignorance.

In gunshot wounds they never explore for the ball, and never attempt the removal unless very close to the surface. They carefully clean the wound and apply a poultice of slippery elm bark or the young sprouts of the basswood, powdered and soaked in water until quite soft. The wound is kept moist with a mucilage from the bark, and is frequently cleansed by suction with the mouth.

They dress a fracture very neatly. First procure a cylinder of bark from a tree about the size of the broken limb. This is soaked in water till quite soft, then carefully adapted to the limb and suffered to dry, first securing it in position with strings of bark. They never use extension or counter-extension, and yet you seldom see shortening or deformity. I once saw a case of compound fracture of the leg, four or five inches above the ankle. Both tibia and fibula were broken, and the soft parts much lacerated. A semi-cylindrical piece of bark was procured, considerably larger than the limb. This was cut deeply on both sides at the knee, so as to bend to a slight inclined plane. This cylinder was filled with soft clay and the limb embedded in it, from the heel to the groin, except the wounded portion, which was left open. The wound was kept clean and dressed with the thick mucilage of elm bark. The patient made a rapid recovery, with but little shortening.

This case was treated by the Indians themselves, I being a simple "looker-on in Venice."

As regards the bite of snakes and the stings of insects, they seem to have no general remedy, each band usually employing a different remedy. The most common treatment for the bite of the rattlesnake is first to suck the wound with the mouth and apply the bruised leaves of the common plantain, or black snake root. They use no internal remedy. For the sting of bees or wasps they use the wild onion bruised, which, from experience, I know almost instantly relieves the pain.

Hydrophobia is not uncommon; for this they have no remedy, put the patient in a separate lodge and carefully guard him till relieved by death.

MITCHELL, D. T., July 20.

The Indian possesses a constitution of wonderful recuperative power. They are subject only to those diseases that depend on atmospheric vicissitudes and malarial exhalations, excepting eruptive diseases—as small-pox and measles, and I am inclined to the belief that those diseases are from contact with the whites. Scarlatina, diphtheria or typhus, or typhoid fever, I never saw among them, their mode of life being unfriendly to their development.

The fevers common among them are intermittent and remittent. For the treatment of these they have a routine treatment—an emetic or cathartic, followed by a vapor bath, from which the patient is immediately plunged into a cold one, or, if a pond or pool of water is not convenient, a sponge bath, using cold water, applied with a wisp of grass, after which they are covered with blankets or skins, and diaphoresis kept up for some time by the use of warm drinks—as the calamus, or some of the varieties of the mints. As a tonic they use the bark from the root of the different varieties of the willow (salix) in decoction, also the bark of the aspen, poplas tremuloides. It is rarely that they die from remittent fever. They also often use the lancet, bleeding without regard to sex, age or physical condition. This practice I think they have borrowed from the whites. For this operation they use a thin scale of flint, fastened by screw in a stick and driven into the vein, as the horse farriers used the fleam years ago. In pneumonia, bleeding is the most common remedy. In rheumatism they rely almost wholly on the vapor bath, yet I have seen the cimicifuga (black cohosh) used by them in decoction. The vapor bath is a small tent, made by bending two small poles across each other and fixing the ends on the ground, then

covering this frame with skins, several large stones being heated and placed inside. The patient is placed within, and water sprinkled on the stones, soon "raising steam."

They have no idea of the sympathy which may exist between the different organs, but locate the disease wherever the pain may be. I have frequently had them call on me for headache medicine, side-ache medicine, belly-ache medicine, etc., making no greater mistake than I have seen made by men with M.D. attached to their names, prescribing for symptoms in place of the disease. They use quite a number of the indigenous medicinal plants, having learned from experience that certain plants will produce certain effects; that chimaphila will increase the flow of urine, and that a decoction of the bark of the butternut (juglans) will produce a cathartic effect.

They have one remedy for mucus enteritis which is deserving of a trial. It is the bark of the buttonwood, or american sycamore (platanus occidentalis). It is used in decoction, and is used *ad libitum*. Its taste slightly resembles chocolate, is very slightly astringent, and powerfully diaphoretic.

During the autmn of 1853 dysentery prevailed among the soldiers, and also among the Indians, as an epidemic. I watched their treatment, and found they were more successful in the treatment than I was, whether owing to their great recuperative powers, or to some other cause, I will not say. Since that time I have used the same remedy in my private practice, in conjunction with the usual remedies, and was pleased with the result. On this bark they relied solely.

Cupping seems to be one of their old remedies. You will scarcely see an Indian of any age who has not the scars of scarification about the temples or neck. The operation is performed by scarification with a scale of flint, and the blood extracted by suction with a horn by the mouth of the attendant, used particularly in inflammation of the lungs and headache. They pay no attention to diet, the sick using the same food as the other occupants of the lodge.

For poisons, snake-bites, and the stings of insects, they have no reliable remedy. The most important is suction of the wound with the mouth. I observed that the different bands each had its particular remedy. The most common are the senega snake-root and the common plantain (alisma plantago). and the yellow dock (rumex crispus). The bite rarely proves fatal, either among the whites or Indians. When death ensues it is from hæmorrhage, bleeding from the nose and gums. The poison seems to defibrinate the blood. I have probably treated over fifty cases of rattlesnake-bites, and never saw but one fatal result. Many of the recoveries were long and tedious.

The general treatment is like the treatment of typhus fever, an expectant and supporting treatment. Ammonia is one of the most valuable remedies in the early treatment, both internally and externally to the wound. Whisky, the vaunted remedy, is of very little account after the first few hours, except given with milk as a supportant.—(This is wandering from my subject, but, as I told you before, my remarks would be disconnected.)

The following is a list of the remedies in most common use:

The cambium of the different varieties of the pines, as expectorant and also in gonorrhœa; symplocarpus fœtidus (skunk cabbage), expectorant and used in asthma; Sambucus canadensis, used as a poultice; Alisma plantago (plantain), in snake bite and poison from the ivy or poison sumach Sassafras, expectorant; Chimaphila Maculata, diuretic; Ulmus (fulva), emollient, demulcent Asclepias Tuberosa, emetic; cortex Salicis, different species, febrifuge and tonic; Leptandra viginica snake bite; Polygala senega, snake bite; Rumex crispus, snake bite; Acorus calamus interna fever; Lycoperdon bovuta (puff-ball), styptic, and in wounds to arrest hæmorrhage: Artemesia canadensis, tonic; Cortex Querci, tonic and astringent Geranium maculatum, astringent, used extensively in diarrhœa. The bark of the button wood (Platanus occidentalis), used in dysentery. As a stimulant they use a plant, in common parlance called horse mint, and named by botanists Monarda punctata, which is of the same genus as the well-known Oswego tea. This I saw them use in cases of Asiatic cholera, which prevailed among them, using it both internally and externally—very hot. I think they were as successful as I was in the treatment.

Eruptive diseases are almost always fatal among them, the eruption being repelled by cold applications, to which they invariably resort in all cases of increased heat of the surface.

Measles is fully as fatal as small-pox among them.

If you wish to ask any particular questions, shall be happy to answer, if able to do so.

Hoping to have the pleasure of a personal interview sometime during the summer,

MEDICAL PROGRESS.

A RAMROD IN THE BRAIN—RECOVERY.—This is a most graphic and interesting account of a case, the details of which would take up far more space than we can afford to give. By the discharge of a carbine an iron ramrod passed into the right side of the back near the fourth dorsal vertebra, upwards along the thorax, through the deeper tissues of the right side of the neck, penetrating through the skull and brain and projecting 30 cm. outside of the skull on the left side of the head. By cutting down upon the wound in the neck, the ramrod was extracted after striking the projecting end (through the back) with a hammer several times, and the patient recovered with loss of sight in the right eye.

The patient, Mutz, was a 17 year old man servant who was shot at a Schutzenfest by a young peasant who stood directly behind him, the ramrod in the barrel of the carbine, and by dropping the butt suddenly upon the ground the gun was discharged. The first movement made by Mutz after he was shot, was a tottering without falling, and seizing the ramrod with both hands. A comrade sprang to him, put out the fire of his clothing at the back, and laid him on the grass, where he remained ten minutes

)tionless, without speaking and with his eyes shut. ıere were two different ineffectual attempts made by : bystanders to draw the ramrod out of the wound, sing his head and shoulders from the ground, and agging him a short distance; following this came usea, vomiting; a deep sigh and intelligible answers questionings.

He was first seen by Dr. Fischer at the hospital ;eral hours after the accident, when 30 cm. of the ew end of an iron ramrod projected from the left le of the skull, 8 cm. distant from a line perpendicu- to the left supra-orbital foramen, and so tightly dged that not a drop of blood escaped. The tis- es about the angle of the lower jaw on the right side :re swollen and very painful on pressure, the finger ssed deep into the pharynx, found nothing abnor- ıl. Between the right shoulder-blade and spine, on level with the fourth dorsal vertebra, was a gunshot)und of the size of a ten-penny piece, with black- ed edges, from which oozed a thick bloody fluid. e lay exhausted and apathetic with closed eyes, put- ıg his hand now and again to the right side of the :ck; but when spoken to gave proper answers, com- aining of headache, pain in the right side of the :ck, and of not seeing so well as usual; the pupils :re dilated. From the right nostril a bloody colored ıid was discharging. He vomited a tablespooufnl dark red blood, and his sputa was bloody. Pulse); respiration normal.

The question now was how to extract the ramrod, -in the direction of entrance or from the wound of :it in the skull. As these ramrods have a thick knob the end, it was decided to cut down on the course of ıe missile in the neck and so withdraw it. The opera-)n was performed without narcosis, by an incision cm. long, made from the angle of the lower jaw, on ıe right side to the anterior border of the sterno- astoid muscles, the knob of the ramrod being found ing deep beneath the upper part of the muscle near s posterior border. The greater vessels were not :posed—not much hæmorrhage, only one small artery ligate. An incision was then made down to the)int of exit, and the ramrod was found to be im- ıovable, with no fissures in the bone about it. A ammer was used for striking careful blows on the :posed end, when after a few blows the rod moved, ut in the direction of the original wound, and threat- ıed to pass into the soft parts. By changing the)sition of the body, and passing elevators under the rojecting part, he was enabled finally to remove it. he patient was conscious during the operation, and : its close his pulse was 72; he complained only of eadache. The ramrod was 50 cm: long, varying in ıickness from 6 to 7 mm. On the 68th day Mutz as discharged as cured.

Symptoms—Brain.—At the moment of being shot, tottering; in the first ten minutes he lay motion- :ss, speechless, eyes closed, with a deep rattling in ıe throat. After an hour he answered questions cor- :ctly. Three and a half hours later, on his entrance ıto the hospital, the period of depression was over.)uring the operation he was perfectly conscious. fter the removal of the ramrod there must have een some bleeding along the track from the wound of the dura mater at the points of entrance and exit, which was unimportant, as no symptoms of compression of the brain followed. The headache which ensued may be traced to this cause and not to meningitis, as there was no fever. This, on the third day, was severe, and on the eighth and ninth days was accompanied with constipation; then became less marked, and disappeared on the nineteenth day. Vomiting occurred only the first night and the day after the operation. Sleep became natural after the fifth day. There was no paralysis. The pulse fell to 52 on the fourth day. On the twenty-eighth day and after he could sit up for an hour at a time. His memory tailed him as time passed; he could remember everything up to the time of receipt of the injury, but his being laid on the grass, brought to the hospital, and being operated on he had forgotten.

Discharge of the Cerebro-Spinal Fluid from the Right Nostril..—This continued for twelve days, at first continuously and bloody, then intermittent and of a yellow color; at times passing into the pharynx and coughed up. It never came from the left nostril.

Amaurosis of the Right Eye.—On his entrance into the hospital he complained of not seeing well; both pupils were dilated and nothing abnormal was noticed. The following day amaurosis of the right eye, with perfect vision of the left, was diagnosticated. At the sixth week a commencing atrophy of the right optic nerve was determined by the ophthalmoscope.

Suppuration of the Right Ear.—On the twelfth day Mutz complained of a pricking in the right ear, from which a slight discharge came. He heard the watch only 12 cm. removed, but very well when pressed against the bone. On the seventeenth day a suppuration was established, which soon stopped under treatment by pulverized boracic acid. In the fifth week he heard the watch one-half meter distant. In the seventh week both ears were alike.

The sense of smell was normal.

Temperature and Pulse.—On the morning of the operation the thermometer was 37.9, in the evening 38.3. In the first two weeks the morning temperature was usually 37.6, and in the evenings 38.3. In the next five weeks, morning 36.8, evening 37. Only once, on the ninth day, did the thermometer indicate anything serious. On that day the record stood, morning 38.8, midday 39.9, evening 39.9. An operation from the bowels relieved a constipation of three days standing, and the temperature was reduced. The pulse gave no special indications. The character of the patient seemed to undergo no change. His employer described him as a very good peasant, who took his punishment quietly. In the hospital he seemed phlegmatic, and careful of his health.

Direction of the Wound.—After considering carefully the various symptoms, and experimenting upon the cadaver, Dr. Fischer comes to the following conclusion as to the course of the wound: The ramrod entered the right side, opposite the fourth dorsal vertebra, between the splenius cervicis and levator anguli scapulæ, without penetrating the cavity of the thorax, and passed up the neck in front of the inter-

nal jugular vein and common carotid artery, and behind the sterno-cleido-mastoid, posterior belly of the digastric, stylohyoid, and stylo-glossus muscles. It entered the base of the skull behind the posterior border of the middle root of the pterygoid process, went through the right sphenoidal sinus and the lower portion of the alæ orbitalis, through the right optic canal, lacerating the optic nerve, and passed from the border of the sphenoid into the cranial cavity. Here the ramrod struck the right gyrusrectus, and then passed freely for some distance between the two hemispheres, on the left side of the falx cerebri; then passed between the two gyrifornicati, just in front of the anterior border of the genu of the corpus callosum, and passed through an extent of 3 cm. in the left gyrus frontalis superior, out through the frontal bone. The track of the wound is 35 cm. long.—Dr. George Fischer, *Deutsche Zeitschrift für Chirurgie*, XVII., B., 5 and 6.

Case of Separation of the Symphysis Pubis.—This occurred in a sixteen-year-old girl, who was thrown from her horse whilst riding astride on a man's saddle, and dragged some distance. When seen, a little over six weeks after the accident, she was found to be suffering from bed-sores on the back and buttocks, with a sinus in the left groin passing close to the labium. There was a copious, thick and very fetid discharge from the vagina—gritty when rubbed between the fingers. There existed a separation of the pubic symphysis of 1½ inches. On introducing the finger into the vagina the roughened edges of the pubic articulation, denuded of cartilage, could be easily made out. The finger in the vagina could be plainly felt by the finger of the other hand, placed on the mons veneris, nothing but skin intervening between the two. The orifice of the urethra was dilated and in an altered position. Six months after the accident the finger, introduced into the vagina, encountered firm bands of tendenous substance, and uniting the pelvic articulation, part of the edges of the pubic articulation could still be felt, but smooth and covered by membrane. When first allowed to walk the girl felt "loose," and a feeling as though she was falling asunder. This only exists in a very slight degree later, and is quite counteracted by a firm band round the hips. Incontinence of urine from the first and cessation of the menses.—J. S. Hayes, M.D., *Australasian Medical Gazette*, April 15, 1883.

A Case of Chylous Ascites.—Mr. Kien communicates to the Societé de Médicine de Strasbourg, as reported in the *Gazette Médicale de Strasbourg*, the case of an old maid of 50 years of age, who, suffering from abdominal dropsy, had been tapped by him eight times in four months, drawing off each time some four gallons of a fluid absolutely like milk in color and density. He was unable to detect any abnormal condition in the cavity itself, which was easily palpated after the removal of the fluid, or in the abdominal viscera. Prof. Recklinghausen made a microscopical examination of the fluid, and declared the case to be one of chylous acites. He found lymphatic cells—leucocytes—in different morphological conditions, some fibrinous flakes and some large cells adherent to each other in groups of two or three, with a conformation which *might* indicate cancer. He considered the fluid might come from a rupture of the chyliferous vessels of the intestine or mesentery.

Physiology in England.—Judging from the report for 1882 of Mr. George Burk, the Home Secretary, who grants licenses for vivisections, physiology must be seriously on the decline in England. The *British Medical Journal* tells us (June 16, 1883) that but twenty-six persons performed experiments, and that but between twenty and thirty animals, mostly frogs, were used. How far would twenty or thirty frogs go in a well appointed physiological laboratory?

The same journal tells us, however, of the appointment of Dr. Michael Foster as Professor of Physiology at Cambridge, with Dr. Alexander McAlister as Professor of Anatomy in place of Dr. Humphrey; and that physiology is more and more vindicating its place as the scientific basis of that part of medical science which is not purely empirical. Cambridge Uuiversity now proposes to extend elementary biology over two terms, and to make it form a more complete introduction to general morphology. Botany, comparative anatomy, and much of the old materia medica are being laid in the background as no longer compulsory studies.

Rapid Formation of Blood Tumor in Left Labium Majus during Labor—Spontaneous Rupture—Excessive Hæmorrhage.—Dr. Morris A. Rodger, (*Canada Medical and Surgical Journal*, July, 1883), describes the formation of this tumor as coming on some time after the commencement of labor-pains,—when first noticed it was the size of a pigeon's egg—then increased rapidly with each pain to the size of a fœtal head and burst before the child's head had passed the brim of the pelvis. The rent took place on the inner side of the labium, and was about three inches in extent, running close down to the rectum, but not injuring the perinæum proper—bleeding was very profuse and not controlled until after a forceps delivery of the child, when fine silver wire sutures were used, passing them deeply into the neighboring tissues. There was no history of swelling in the legs, or elsewhere, and no varicosities of the perineal veins. The patient did well.

Reduction of Backward Luxation of the Thumb.—Dr. J. F. Hubner (*Philadelphia Medical Times*, July 14, 1883) treats this condition by separating the two heads of the flexor brevis muscle with two uterine tenaculi, bending their ends to a very acute angle. He inserts them by holding them as nearly parallel as possible to the metacarpal bone, and by a circular motion inserts the curved end of the tenaculum, keeping the point subcutaneous. Next introduce the tenaculum under the head of the muscle in the same manner as you would a tenotome; then, turning the point upward, you have the head of the muscle in the elbow of the tenaculum. Insert the second one in the same manner. Now push the

heads of the muscle asunder, and allow an assistant to push the phalanx in place. In order that the tenaculi may be withdrawn easily, care must be taken not to insert them too far from the normal position of each head of the muscle, and in withdrawing to make a circular sweep of the handle.

In the report of the Committee on New Remedies to the State Medical Society of West Virginia, Dr. J. M. Lazzell called attention to the somewhat peculiar action of an old remedy: Tinctum digitalis, long continued, produces a peculiar and remarkable kind of sweat over the whole body. This is continuous and will remain several days after discontinuing the remedy. The skin is bathed in perspiration, and is shriveled and corrugated like a washerwoman's hands.

Cysticercus in the Eye.—This parasite has been found imbedded in the fundus of the eye, to the outer side of the left optic disc and projecting into the vitreous, overlapping and obscuring the inner third of the area of the optic papilla. Dr. W. J. Collins reports it in the *Lancet* as being present in a girl of six. It has produced intense hyperæmia with effusion, and severe headache. There is no movement as yet, and there are no indications requiring immediate operative interference. Probably sooner or later the eye will be lost.

Dangerous Soda Water.—Dr. George Hay (*Philadelphia Medical Times*, July 14, 1883) has been examining the soda water of a particular druggist, who himself called his attention to it, and found the water to be dangerously impregnated with copper, existing as carbonate of copper, held in solution by excess of carbonic acid, and derived from the saturators, which are in all cases made of that metal and generally coated inside with tin, which gets dissolved in time and exposes the copper.

NEW INVENTIONS.

Bloch's Maximum Thermometer.—This instrument is provided with a system of magnifying lenses, which are so attached to the tube, as to glide over its surface and allow a ready reading of minute subdivisions of the degrees.

Burq's Circular Thermometer, with Maximum and Minimum Indices.—This thermometer is intended to measure surface temperatures, and has connected with it a series of all the malleable metals which Dr. Burq calls the metalloscopic "gamut," to determine the thermic variations corresponding to metallic sensibilities.

A New Drainage Tube.—By J. Ward Cousins, M.D., London, *British Medical Journal*.—This is an elastic tube which is enclosed at one end in an elastic air-pad, to which a fine tube is attached, and by this the pad can be inflated to the required extent. The inflating tube is then securely closed with a knot or ligature. It is especially serviceable in cases or empyema treated by free incision; for, when the pad is inflated, it becomes fixed in position between the ribs, forms an elastic wedge which prevents the escape of fluid around the tube, and exerts a comfortable and even pressure in sustaining the open and dilated condition of the incision.

Professional Rewards.—The *Gazette Hebdomadaire des Sciences Medicales de Montpellier*, for June 30, 1883, tells us that Dr. Monnet last January, while passing through a certain street, went to the assistance of a drunken man whom he saw fall and injure his head. He had him taken to an apothecary's shop, gave him a medicinal mixture, and dressed his head, for which he received a severe blow with the fist. Ten minutes later the drunken fellow was walked out of the shop by a policeman. As the doctor was about to follow, the apothecary demanded 36 cents of him as the price of the mixture, which the doctor refused to pay. A few days later Dr. Monnet received two letters; one from the apothecary summoning him before a justice of the peace; the other from the police authorities, requesting him to appear and give information regarding the drunken man. The doctor, being a very busy man, neglected to pay proper attention to these letters. Consequently, in March last an officer presented himself with the intention of attaching the property of Dr. Monnet, and he found that by this time he had to pay for the sake of the law the sum of $9.96.

The Confiscation of the Entire Issue of one Number of a Medical Journal.—*The Medicinisch Chirurgisches Central-Blatt* of Vienna, has on its No. 6, for February 9, 1883, the words "Second edition," which it explains by the following notice:

"To our readers: The whole edition of No. 6 of our publication was confiscated on account of an editorial on the ministerial decree concerning the titles of surgeons. We have prepared this second edition by leaving out the incriminating article, which we now send to our subscribers, unfortunately somewhat delayed."

A similar action has been taken by the authorities with regard to a recent number (June 2) of the *Wiener Medizinische Wochenschrift*, which offended by remarks concerning the botanical garden in connection with the Josefs-Akadamie. The editors promise a second edition without a repetition of the offense.

The Mortality of the Principal Cities of Europe for the first quarter of the current year: London, (nearly 4,000,000) 22.1 per 1,000. Measles, scarlatina and whooping-cough have influenced this rate greatly. St. Petersburg, 40.6 per 1,000. Typhoid fever and diphtheria have prevailed with great intensity.

Berlin, 24.3. Croup caused the death of 663 in 1,200.000; Brussels, 25.7; Paris, 27.3; Stockholm, 27.8; Vienna, 31.1; Madrid, 36.4. Measles alone gave 402 deaths in a population of 400,000.—*Paris Médical*.

THE

Journal of the American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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CHICAGO, ILLINOIS.

SATURDAY, AUGUST 4, 1883.

YELLOW FEVER.—We gather from the secular papers the following facts regarding measures for preventing the introduction of ships and other things infected with yellow fever, into the seaports on the coast of Maryland and Virginia. The United States Hospital Marine service, under the direction of Surgeon General J. B. Hamilton, established a quarantine and sent the hospital barge Selden to Hampton Roads for the reception of yellow fever sufferers. Infected vessels were ordered to anchor about six miles out from Ocean Beach and Fortress Monroe, until relieved by the health inspector. The boats were thus brought in plain sight of the many visitors at the resorts, and caused so much uneasiness among them that an appeal was made to Secretary Folger. On consultation with the Surgeon General it was decided to call a meeting of the health authorities of Baltimore, Washington, Richmond, Portsmouth, Norfolk, Ocean View, Newport News, and Fortress Monroe, to discuss the general situation and decide upon some plan which would insure concert of action on the part of all places concerned in the emergency thought to confront them, and to obtain the benefit of all available knowledge as to the best locality for the establishment of quarantine grounds. The conference was held July 28, at Fortress Monroe. There were present Surgeon General Hamilton, Dr. Smith Townshend, President of the Washington Board of Health; Dr. George H. Benson, health commissioner of Baltimore; Dr. J. G. Cabell, President of the Board of Health of Richmond; Hon. H. Libbey, member of Congress from the second district; Col. Loder, commandant at Fort Monroe; Capt. Evans, U. S. N., lighthouse inspector; Gen. V. D. Gronor, member of the Norfolk common council; the mayors of Newport News, Portmouth, and Norfolk.

Remarks were made by those who objected to the anchorage of infected vessels off Fortress Monroe. It was thought at the conference that Fisherman's Inlet would be the best location for the quarantine station. It was resolved that "the Secretary of the Treasury be requested to establish a rigid quarantine between the capes immediately, and to continue as long as he thinks necessary," and "that the Governors of Virginia and Maryland be requested to instruct pilots of these waters to pilot all vessels coming into or through these capes from foreign ports to a point opposite the quarantine station, wherever it may be located."

Pilots present inquired whether they would be allowed to go home after piloting in a vessel with yellow fever on board. The Surgeon General said that he did not think the pilot on an infected vessel should be allowed to come ashore for several days after having taken a ship into quarantine. The United States health officer in charge must determine when it would be safe for them to leave. This was not agreeable news to the pilots, although one afterwards admitted having previously caught the fever while piloting an infected vessel into quarantine, and that he had carried the disease on shore.

The action of the conference met with the approbation of Secretary Folger. Surgeon Henry Smith and Assistant Surgeon Glennon, of the marine hospital service at Norfolk, were sent to Fortress Monroe in order to carry out the orders of the Surgeon General in reference to quarantine, The hospital barge Selden was taken to Fisherman's inlet, above Cape Charles, where the quarantine station is established.

A steamer arrived at quarantine, off Baltimore, on July 27, with four cases of yellow fever on board. She was direct from Vera Cruz, and had lost three by death during the passage. A seaman belonging to a brig from Havana died from the fever on July 25, at the Lazaretto station, near Philadelphia. It is evident that under the superintendence of the Surgeon General of the Marine Hospital service, Dr. J. B. Hamilton, the efficacy of quarantine regulations in preventing the introduction of yellow fever will be tested as fully as the existing laws of the general Government will permit.

PROGRESS OF CHOLERA.—During the past week, intelligence from Egypt to July 31 shows that the

idemic had probably passed its crisis, as the num-
r of deaths daily in Cairo and several other cities
d diminished more than thirty-three per cent. In
e *British Medical Journal* for July 21, 1883, is a
port by Dr. J. Mackie, the British consular physi-
an at Alexandria, in reference to the origin of the
sease at Damietta, the place where it first made its
ppearance in Egypt the present season. From the
cts stated in the report, it is evident that all the
cal causes known to favor the development of an
idemic of cholera were present in a high degree of
rfection, not only in Damietta, but throughout the
hole delta of the Nile. In addition to the ordinary
nd well known uncleanly and unsanitary condition
ommon to all Egyptian cities, the river from which
ne inhabitants take their supply of water had been
oroughly contaminated with decomposing animal
atter, from having been made the receptacle of the
odies of numerous animals dead from cattle disease
r bovine typhus, which had been prevailing among
nem severely for several months. The atmospheric
mperature was also unusually high at the time of the
holera outbreak. Dr. Mackie, up to the time of
aking his report, had not found any reliable evi-
ence that the disease had been introduced into
)amietta from the East or any foreign source. Not-
ithstanding some rumors to the contrary, there is no
vidence that any cases of epidemic cholera have yet
ccurred in England or any of the European coun-
ries. But while all eyes have been turned towards
Egypt as the focus from which the cholera plague
ight speedily find its way to other countries, the
ews comes to our National Board of Health that it
s already on this side of the Atlantic, twenty-four
leaths from cholera having been reported as occur-
ing at Rio de Janeiro during the week ending July
6, 1883.

Dr. Roswell Park, who has been in Chicago since
876, and until recently was Demonstrator of Anat-
omy in the Chicago Medical College, has received the
ppointment to the chair of surgery in the medical
lepartment of the University of Buffalo, and will in
few weeks move to that city, where his new duties
wait him, We congratulate the Buffalo school in
ecuring a man of ability, a good scholar, and apt
eacher.

The *Journal of Psychological Medicine and Mental Pathology*, has ceased its publication. It is one of he old journals connected with the last generation, nd was first issued under the editorship of the late Dr. Forbes Winslow, Sr.

SOCIETY PROCEEDINGS.

REPORT OF THE SECRETARY OF THE SECTION ON PRACTICE OF MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY, FOR THE REGULAR MEETINGS, JUNE 5, 6, 7, 1883.

On June 5, 1883, at 2.30 P. M., the Section met in the chapel of the Young Men's Christian Association, 349 Euclid Avenue—Dr. J. H. Hollister, of Chicago, Illinois, in the chair, and J. G. Lee, M.D., of Philadelphia, Pennsylvania, Secretary.

After some preliminary words of welcome by the Chairman, Dr. T. W. Miller read a paper on the "Treatment of Yellow Fever," by Robert S. Murray, M.D., of the U.S. Marine Hospital Service.

The paper elicited an interesting discussion, in which several members of the Section participated. (See a very brief abstract appended to the paper in the number of this journal for July 28, 1883.) On motion, the paper read by Dr. Murray was referred for publication.

Dr. William Morrow Beach, of London, Ohio, then read an interesting paper on "Milk Sickness." Dr. A. B. Palmer, of Michigan, made some interesting remarks on the subject, after which the paper was referred for publication, and the Section adjourned.

On June 5, 1883, at 2.30 P.M., the Section convened at the Opera House, 355 Euclid Avenue—Dr. J. H. Hollister in the chair, and Dr. J. G. Lee, Secretary. Dr. Thomas N. Reynolds, of Detroit, Michigan, read a paper on "The Alimentary Canal in Bronchitis and Phthisis." After a short discussion, the paper was referred for publication.

Dr. W. F. Belfield, of Illinois, then delivered a lecture on the "Germ Theory of Disease," accompanied by microphotographic illustrations.

At the conclusion of the lecture, on the motion of Dr. Austin Flint, Sr., of New York, a vote of thanks was awarded by the section to Dr. Belfield for his interesting and valuable address. The germ theory of disease was further discussed briefly by Drs. Austin Flint, Jr., of New York, and A. B. Palmer, of Michigan.

Dr. John V. Shoemaker, of Philadelphia, Pa., then read a most interesting paper on "Mechanical Remedies in the Treatment of Skin Diseases."

On motion, this paper was referred to the Committee on Publication; after which Dr. L. B. Tuckerman, of Ohio, read an essay "On a New Method of Procuring Pure Pancreatic Juice, with Exhibition of Animal."

On motion of Dr. Hollister, the thanks of the Section were voted to Dr. Tuckerman, and his paper was referred to the Committee on Publication.

On motion, the Section adjourned.

On June 7, 1883, at 2:30 P. M., the Section met in the Opera House, on Euclid avenue, Dr. J. H. Hollister in the chair, J. G. Lee, M.D., Secretary.

Dr. Wm. M. Beach, of Ohio, begged leave to state that his friend, Dr. H. G. Sharp, of Ohio, not being able to be present, his paper on "Is Croupous Pneumonia an Essential Fever, and is Blood-letting De-

manded in its Treatment?" which had been entrusted to him, would have to be referred to the Committee on Publication, without being read.

In accordance with the rules of the American Medical Association, the Chairman announced that he would appoint Dr. H. A. Johnson, of Illinois, Dr. A. B. Palmer, of Michigan, and Dr. Walter Hay, of Chicago, members of the committee to which the papers not read before the Section should be referred, Dr. Johnson to act as chairman.

Dr. Henry A. Martin, of Massachusetts, being momentarily absent, his paper on "Vaccination, and Propagation of Vaccine Virus," was deferred; and Dr. J. Solis Cohen, of Pennsylvania, read a paper on the "Elements of Prognosis and Therapeutics of Laryngeal Tuberculosis," upon terminating which, Dr. Cohen exhibited some handsome colored plates, illustrative of the facts set forth in his paper.

On motion of Dr. Fairbanks, of Michigan, a vote of thanks was extended Dr. Cohen for his valuable and instructive paper, which was then briefly discussed by Dr. Hollister, and referred to the Publication Committee.

Dr. Henry A. Martin, of Massachusetts, then read a paper on "Vaccination and Propagation of Vaccine Virus." Dr. Mitchell, of Rhode Island, corroborated Dr. Martin's statements, and gave the Section the benefit of his experience in using the proper sort of vaccine virus.

On motion, Dr. Martin's paper was referred to the Publication Committee.

Dr. James C. Wilson, of Pennsylvania, being absent, his paper on "The Specific Treatment of Enteric Fever" was omitted from the proceedings.

Dr. A. T. Keyt, of Ohio, then read a paper on "Diminution of Retardation of the Pulse in Aortic Insufficiency." During the discussion which followed, Professor Palmer, of Michigan, said that Dr. Keyt's paper was worthy of the highest praise, sentiments in which he was joined by Drs. Hollister and Scott. Upon motion of Professor Palmer, the thanks of the Section were voted to Dr. Keyt, and his paper was referred to the Committee on Publication.

Upon motion of Professor Palmer, of Michigan, a vote of thanks of the Section was extended to the Chairman and the Secretary for the admirable manner in which they conducted the meetings of the Section.

On motion, the section then adjourned *sine die*.

MEDICAL SOCIETY ITEMS.

WE have received the following preliminary announcement relating to the American Public Health Association, and commend it to the attention of our readers:

This Association will hold its eleventh annual session at Detroit, Mich., commencing Tuesday, Nov. 13, 1883, and ending Friday, Nov. 16.

The following subjects are chosen for special consideration at that time:

I. MALARIA.—Its etiology, its American history, its specific particles, its origin, methods of prevention, etc.

II. FOODS.—Their adulterations; healthy or deleterious modes of preservation, and the function of legislation in regard to them. Ascertained facts as to adulterations in this country; facts as to canned goods, condensed milk, artificial butter and cheese, prepared meats, etc.

III. VITAL STATISTICS.—Methods and results; defects apparent; how foreign modes of tabulation are to be followed; systems of collection and classification; race vitality and the care of population as indicated by statistics.

IV. The control and removal of all decomposable material from households; the mechanical laws, constructions and appliances relative thereto; the construction of all inside pipes and their connections, their traps and syphonage; flushing; ventilation; how they shall be connected with out-door receptacles, and yet be free from ill effect.

The executive committee desires to secure facts and opinions as to practical methods of dealing with the interest of the public health. Reasons for the views entertained, the results of experience, and the best judgment as to preventive and restrictive measures are especially sought.

Methods and systems of physical education, drill, etc., feasible in the school-room, will be discussed. While papers of merit on other topics are by no means excluded, it is believed wise to concentrate the preparation of papers and discussion upon these topics.

The special committees on compulsory vaccination, the management of epidemics, and on diseases of animals, will, before the completion of their reports, be glad to receive communications from any who have facts or opinions bearing on these subjects.

The executive committee feels warranted in saying that the meeting promises to be one eminently inviting and profitable, and urges the attendance and co-operation of physicians, engineers, architects, teachers, and all those interested in the advancement of public health and physical well-being.

Inquiries of a local character may be addressed to Wm. Brodie, M.D., Chairman Local Committee, Detroit, Mich.

A later notice giving such detailed information as to local points, programmes, transportation, etc., as may be available, will be issued in due season before the meeting.

THE fifty-first annual meeting of the British Medical Association was held at Liverpool July 31, August, 1, 2 and 3. Its presiding officers for the year 1883, were, President, Thomas Lawes Rogers, of Rainhill; Vice Presidents, George H. Savage, of London, and David Yellowlees, of Glasgow.

THE sixth annual meeting of the American Society of Microscopists will be held in Chicago next week. The opening session will be at the Weber Music hall and the regular meetings at the College of Pharmacy, corner of Van Buren street and Michigan avenue. The following is a list of the papers which are to be presented so far as yet received: W. H. Birchmore, Carbondale, Kan., "Some Notes on Embolism in Pigs;" Thad. S. Updegraff, Elmira, N. Y., "A List

of Hitherto Undescribed Infusoria;" A. H. Chester, Clinton, N. Y., "A New Method of Dry Mounting;" George E. Blackham, Dunkirk, N. Y., "On the Relation of Aperture to Amplifying Power in the Selection of a Series of Objectives;" W. A. Rogers, Cambridge, Mass., "A Critical Study of the Action of Diamond in Ruling Upon Glass;" W. A. Rogers, Cambridge, Mass., "Report on the Standard Centimetre Prepared by the United States Bureau of Weights and Measures;" W. C. Brittan, "On the Laminate Structure of Dentine;" W. H. Birchmore, "Details of a Neoplasm;" M. L. Holbrook, "The Termination of the Nerves in the Kidneys;" J. T. Brownell, Mansfield, Pa., "A Basis of Natural Classification of Plants Founded on Their Seeds;" J. T. Brownell, Mansfield, Pa., "The Eureka Turn-table;" George E. Fell, Buffalo, N. Y., "Effects of Ozoon on Bacteria;" D. S. Kellicott, M.D., Buffalo, N. Y., "Some Parasites of the Crayfish;" D. S. Kellicott, M.D.., Buffalo, N. Y., "An Improved Aeroscope;" F. M. Hamlin, Auburn, N. Y., "Microscopical Examinations of Seminal Stains on Cloth;" C. M. Vorce, Cleveland, O.," "On Organisms Found in the Waters of Lake Erie;" A. M. Bleile, Columbus, O., "Further Notes on the effects of the Division of the Vagi;" H. L. Smith, Geneva, N. Y. (title of paper not yet given); Allan Y. Moore, Cleveland, O., (title of paper not yet given); L. M. Eastman, Baltimore, Md., "On Some Egglike Bodies in the Liver of Rabbits."

At the recent meeting of the American Otological Society, Dr. C. H. Burnett, of Philadelphia, was made President for the ensuing year; Dr. J. S. Prout, of Brooklyn, Vice-President; Dr. J. J. B. Vermyne, of New Bedford, Secretary and Treasurer.

The American Dental Association meets August 7 at Niagara Falls. Its officers are—President, W. A. Goddard, of Louisiana; Corresponding Secretary, A. W. Harlan, of Chicago; Recording Secretary, Geo. A. Cushing, of Chicago.

The officers elect of the American Ophthalmological Society are, President, Dr. H. D. Noyes, of New York; Vice-President, Dr. W. F. Morris, of Philadelphia; Secretary and Treasurer, Dr. R. H. Derby, of New York.

The National Dental Association will meet August 3, in Washington, D. C. President, J. B. Rich, of New York; Secretary, R. F. Hunt, of Washington.

From the 25th to the 28th of September a society of alienists will meet at the asylum, Nueva-Belen, near Barcelona.

The Sanitary Institution of Great Britain will hold its meetings from the 25th to the 29th at Glasgow, Scotland.

REVIEWS.

Guy's Hospital Reports, Vol. XLI.—The annual report of Guy's Hospital for 1882 begins its pages with a memorial biography of Joseph Towne (by Thomas Bryart), modeller to Guy's Hospital for fifty-three years. It seems that his first work of importance was done at the age of seventeen years, in secret and by night, with the dim light of a candle. It was the model of a human skeleton, and was built up from drawings taken from books, and from such specimens of human bones as could be obtained in a then remote country village, was exhibited at the Society of Arts in the year 1826, and won the first gold medal of the Society. It brought Mr. Towne directly under the notice of Sir Astley Cooper, who accepted him as his *protégé*, and led to his employment by Guy's Hospital, where his works, to the number of a thousand, testify to his industry and faithfulness to true scientific representation and the principles of art. Calcutta, Madras, Bombay, New York, Alabama, New South Wales and Russia also possess many fine specimens of his work. He executed several successful models as a sculptor, as a bust of Sir Astley Cooper, of Dr. Thos. Addison, an equestrian statue of the Duke of Kent, and others, but found it necessary to give up the work of the sculptor, as it interfered too much with his modelling. He also delivered a course of lectures at Guy's Hospital, on the Brain and the Organs of the Senses and of the Intellect, contributing valuable and suggestive papers on the Stereoscopic Theory of Vision, etc. He died June 25, 1879.

Dr. C. Hilton Fagge reports a case of phosphorus poisoning, with recovery, under the administration of turpentine. The patient swallowed half a sixpenny bottle of Cooper's phospho-paste mixed with whisky. He came under treatment first by emetics, two and a half hours after taking the poison. The emetics evidently assisted in the removal of much of the phosphorus, when he was put upon the turpentine treatment, leaving the hospital in ten days time.

Dr. W. Hale White reports a case of symmetrical softening of the corpora striata, followed by bilateral descending degeneration, with secondary anterior poliomyelitis, and Dr. George H. Savage discusses several cases of exophthalmic goitre with mental disorder.

Dr. W. Arbuthnot Lane, in giving cases of empyema in children treated by removal of a portion of rib, considers that a portion of rib or ribs be removed at first, in this disease, and the cavity thoroughly drained from the beginning, in none of his cases, except one, did he have any trouble with the growth of bone interfering with the opening except in the first one. He divides the periosteum longitudinally, turns it off the rib, and then removes a piece about three-quarters of an inch long with the cutting forceps.

An account of abnormalities observed in the dissecting-room of Guy's Hospital, by Drs. Carrington, Horrocks and White, makes us wonder why more of this sort of work is not done by our own men. No one can pass a season in the dissecting rooms of any of our colleges without observing something that is worthy of permanent record as anomalies. Our demonstrators of anatomy should all of them be compelled by their respective Faculties to keep such a record as a report of work done, which they could publish afterwards to their own credit, and add valuable material to the cnrrent literature.

Drs. Golding-Bird and Mahomed give two cases of

pulsating tumor at the root of the neck. One was aneurism, but was accompanied with peculiar symptoms. The other was a post-sternal abscess, which simulated aneurism. The sphygmographic tracings taken in connection with these cases are interesting features of their reports.

The surgical affections of the tongue, by Thomas Bryant, forms an admirable grouping, with illustrations, of a variety of cases, and among other things illustrates the connection of syphilis with cancerous disease of the tongue.

Mr. Samuel Wilks, in a paper on Hemianesthesia, gives cases with metallotherapie. He admits certain facts observed in connection with the cure of anæsthesia by metals, but has as grave doubts as to their modus operandi as he has to the correctness of the theory as to the supposed seat of the disease. He finds a difficulty in distinguishing between men and women in respect to considering this disease a functional disorder, as the hysterical phenomena show themselves also in the male, with the same kind of mental and moral perversity as exists in women. In one case he makes the following comment: "The case exemplifies what every medical man must have seen, not only that in hysteria and some nerve disorders medicine is useless, but that it often does positive harm. Whilst this girl was under treatment she made no improvement, and when the case became interesting, on the introduction of the new system of 'metallotherapie,' all chance for her was gone. Neglect was the treatment she needed. It was more than she could withstand. Her reflections, on finding herself in bed for a fortnight with no one caring for her, roused her dormant will, and was, therefore, exactly the stimulus she wanted."

Dr. Goodhart reports four cases of what he calls saturnine lunacy; and Dr. Davies Colley gives cases of acute gonorrhœal rheumatism, considering that this disease occurs as often in females as in males, if not more often, and that its favorite seat is the fibrous tissue of the elbow joint.

Mr. Jacobson discusses enchondromata of the salivary glands; and Dr. Pye-Smith, in a long and valuable article, gives a case of idiopathic anæmia of addison, with a commentary and tables of selected cases, which is a valuable monograph in itself, as it thoroughly covers the ground and gives a full bibliography of the subject,

Dr. Thomas Stevenson, under the head of poisoning by aconitine, gives the details of the case of poisoning by Dr. George Henry Samson of his brother-in-law, Percy Malcolm John, which excited much interest in 1881. A full description of the analysis of the viscera follows,with an account of aconitine and cases of poisoning by the use of the drug.

Golding-Bird, in giving laboratory notes on the working of the histological class, sets down what he considers the best and shortest way of preparing tissues, cutting and staining sections, etc. He gives an excellent cut of the ether microtome.

Cases of paralysis of the abductors of the vocal cords are recorded by Dr. Frederick Taylor, in which he illustrates both organic and functional affections. In the first he recognizes the unexplained fact that in injury or disease of the roots or trunks of the pneumogastric, spinal accessory or recurrent nerves, the abductor filaments are liable to become affected sooner than the others, and may be affected alone. Two of his functionally affected cases illustrate the fact that dyspnœa and inspiratory stridor from approximation of the vocal cords, may occur as a temporary affection, which is not spasmodic, and has not for its remote cause an organic lesion, but probably some conditions of nerve failure, as hysteria or exhaustion.

Dr. Carrington, under the head of Multiple Small Abscesses of theLiver, records thirteen cases at considerable length, and Dr. Golding-Bird discusses Pes Valgus Acquisitus, Pes Pronatus Acquisitus and Pes Carus. Dr. Thomas Stevenson discusses lead-poisoning, and Dr. Branley closes the volume with an article on the vitreous body in its relation to various diseases of the eye.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA. Held at Grafton, May 16 and 17, 1883.

PROCEEDINGS OF THE EIGHTH ANNUAL SESSION OF THE SOUTHERN ILLINOIS MEDICAL ASSOCIATION. Held at Sparta, Ill., May 9 and 10, 1883.

These are two pamphlet volumes containing a record of the proceedings of each society. In the latter no papers are printed. The proceedings as recorded consisted of questions and answers from various members of the society upon very common subjects. The utility of a printed record of this kind is limited entirely to the members of the society.

In the former the first twenty-four pages contain a record of business transacted, an enumeration of the papers read, and, very briefly, the comments made upon them. The remaining sixty pages give: The Address of the President, Dr. B. W. Allen, of Morgantown; the Report of the Committee on Epidemic Diseases, by Dr. R. W. Hall, of Mannington; the Report of the Committee on New Medicines, by Dr. J. M. Lazzell, of Fairmont. A short but most excellent article follows these by Dr. E. C. Myers, of Wheeling, on the "Germ Theory of Disease." He briefly, but impartially, and very thoroughly reviews the subject, pointing out facts, and distinguishing carefully between what is supposed and what is true or demonstrated ccnclusively. The next paper is by Dr. D. P. Morgan, of Clarksburg, on the "Abuse of Ergot in Obstetric Practice." Dr. G. H. Carpenter, of Moorefield, discusses "Insanity as a Disease," and urges the general practitioner to study this subject with greater care, and not to leave it so much in the hands of specialists. If this were done asylums might not be so well filled, and, at the same time, there would be fewer insane persons in the community. "Puerperal Fever and Its Treatment by Intra-Uterine Antiseptic Irrigation," is ably considered by Dr. S. L. Jepson, of Wheeling. He has carefully culled the opinions of the best authorities on the subject, and presents the matter clearly and logically for consideration by the reader. The two last papers are "Report of a Case of Intra-Peritoneal Hæmatocele," by Dr. R. W. Hall, of Mannington,

and a "Record of Some Anomalous Obstetrical Cases," by Dr. C. F. Ulrich, of Wheeling.

Bacteria and the Germ Theory of Disease; by Dr. H. Gradle. Chicago: W. T. Keener; 1883.

This volume comprises eight lectures delivered at the Chicago Medical College by Dr. Gradle, Professor of Physiology in that institution.

In this work it was evidently the writer's aim to present a clear and concise statement of the facts which have been established concerning the germ theory of disease; and not only this, but also to describe the methods which have been employed by the principal investigators in the elucidation of the manifold mysteries in which this interesting and important subject is involved. By succeeding in these regards, as he certainly has done, he has given his readers a volume replete with interest, and has enabled them to judge for themselves of the reliability of the testimony which has been advanced for the substantiation of the theory.

The subject is systematically and thoroughly dealt with from beginning to end, but, while criticism is freely employed, it is, nevertheless, so fairly done and is so free from all personality, that the writer cannot be accused of undue prejudice, although it is clearly evident that he is inclined to adopt the most advanced views with regard to the etiology of the diseases which are discussed.

The reader's attention is first directed to the universality of microscopic parasites and their relation to putrefaction and fermentation, the accomplishment of which is regarded as the life work of living beings. In the second lecture the microscopic examination of bacteria is fully considered, and their structure, habits, and modes of reproduction are described. The third lecture is occupied with further considerations of bacterial life, and a discussion of the agencies which are at work in nature for the accomplishment of their destruction. Lecture four considers bacteria with reference to their relations to the animal body, both in health and disease, and discusses the results of protective vaccination against chicken-cholera and charbon. The fifth, sixth and seventh lectures treat of the relations of bacteria to each of the several constitutional diseases with which they have been regarded as causatively associated.

With regard to tuberculosis, the author takes the ground that the presence of characteristic tubercle bacilli in the sputum is one of the most constant signs of the disease, for the bacilli can be found, as he asserts, in the sputum of at least 90 per cent. of phthisical patients. The author himself, who is an enthusiastic investigator, and has given much careful attention to the examination of bacteria, found the bacilli in 35 consecutive cases of tubercular patients. He admits that the tubercle bacilli are not always to be found, but asserts that no one has as yet been able to show that the disease can ever exist without the presence of the bacillus tuberculosis

In this connection mention is made of Spina's experiments, which have recently been published as a complete refutation of Koch's work. To meet these objections to Koch's theories, the latter is quoted to the effect that Spina's experiments show a lack of skill and familiarity with the proper methods of investigation, while his results are substantiated merely by the effects produced by the inoculation of two rabbits, Koch's assertions, on the other hand, being based on the results of researches involving over two hundred animals of various kinds.

The final lecture is devoted to a consideration of the local diseases which may be regarded as of bacterial origin.

Taken as a whole, this is a work which redounds greatly to the writer's credit. No extreme grounds are taken, but the evidence is carefully epitomized and candidly placed before the reader. To those who are unfamiliar with the amount of painstaking labor required by the men who make it their work to investigate this most difficult subject; it will come as a pleasing revelation, while by that more numerous class which has long been more or less acquainted with the results of microscopic investigation, it will be welcomed as a highly interesting summary of all that has been accomplished in this direction up to the present day.

Alcohol as A Food, A Medicine, A Poison, and as A Luxury, by George D. Pitzer, M.D., of St. Louis. This is a pamphlet of sixty-one pages, written in any easy and readable style, well adapted for popular use. The more important views of the author regarding the effects of alcohol and its uses may be gathered from the following quotations from the closing paragraph of the essay: "It (alcohol) is not, nor can it be, a substitute for food. But is a poison greatly to be dreaded, and can be used as a medicine only in skillful hands, and then, in many cases where it is still used, other drugs recently introduced are far more effective, besides a great deal safer. It has no power to avert disease when taken as a beverage in health, but on the contrary, it renders people more liable to be attacked, and its continued use greatly reduces their power of endurance, and they are not nearly so able to resist disease when it comes."

Electricity in Medicine and Surgery, by Geo. C. Pitzer, M.D. The author of this little book is a professor in an eclectic medical college of St. Louis; but that need be no reason why his book, if a good one, should not be read. The first part is occupied with simple descriptions of electrical machines. The rest is a brief consideration of electro-therapeutics. Many extended quotations are made from good authors, and a few cases are detailed by the author in illustration of the good and negative results of treatment by electricity. From the work one could not get a thorough nor a very satisfactory knowledge of the subject, although, by its guidance, he might use electricity in his practice with success.

BOOKS AND PAMPHLETS RECEIVED.

The Hydatiform Mole, by J. P. Miller, M.D., (Reprint).

The Electric Light in Surgical Diagnosis, by Roswell Park, M.D., (Reprint).

Report of the Health Officer of the District of Columbia for 1882.

Berichte des Naturwissenschaftlich-Medicinischen-Vereins in Innsbruck, XI Jahrgang 1880-'81.

Perinaphric Abscesses, Roberts (from *American Journal of Medical Sciences*), April, 1883).

Double Synchronous Amputation of Lower Extremities in Five Cases of Railroad Crush. By E. H. Woolsey. (From Transactions of State Medical Society of California, 1883.)

Therapeutic Value of Cephalic and Spinal Electrization. By C. H. Hughes.

A Physical Analysis of a Legally Sane Character. By C. H. Hughes.

The Simulation of Insanity by the Insane. By C. H. Hughes. (From *Alienist and Neurologist*, 1883.)

Proceedings of the Eighth Annual Session of the Southern Illinois Medical Association, 1883.

MISCELLANEOUS.

THE first annual supper of the Chicago Dental Infirmary occurred at the infirmary, Nos. 22 and 24 East Adams street, July 31. The infirmary has been open a year and is doing excellent work. The officers are: James A. Swasey, President; A. W. Harlan, D.D.S., Vice President; Eugene S. Talbot, M.D., D.D.S., Recording Secretary; Truman W. Brophy, M.D.,D.D.S., Corresponding Secretary; Edgar D. Swain, D.D.S., Treasurer.

The institution is incoporated under a general law of the State of Illinois, and is authorized to give instruction in the specialty of dental surgery. It is empowered also, to confer the degree of Doctor of Dental Surgery. This degree will be conferred only upon persons holding a degree in *medicine* from colleges recognized by the Illinois State Board of Health. Matriculates intending to take the degree of doctor of dental surgery must hold a degree in medicine or be pursuing studies to that end in some reputable medical college.

It is the hope of the founders of this institution, that in time all dentists will be graduates in medicine as well as skilled in their specialty. The Infirmary affords clinical advantages for the study of dentistry, while it is expected that at the same time its students will attend some one of the regular medical colleges of this city.

DR. BROWN-SEQUARD, on account of his labors in physiology, has been awarded by the Royal College of Physicians, the gold medal which was founded in memory of Dr. Baly.

NECROLOGICAL.

MCDOWELL, GEORGE MONTGOMERY, M.D., of Barnesville, Georgia, was born in Pike county, Georgia, July 26, 1834, died at his residence, July 22, 1883. He was the son of Charles and Elizabeth Heard (Crain) McDowell. His education was derived from private tutors and at the Pike Academy. His medical degree was conferred after due attendance on lectures at the Jefferson Medical College in Philadelphia, in 1855. The same year he began practice in Barnesville, but in 1857 removed to his plantation. In 1860 he resumed general practice. The war between the States breaking out, he raised a company in the 4th Georgia Battalion, which he commanded as Captain, and in which position he was both popular and brave. But the demands were so general for his medical services by all who knew him, that he was induced by General Bates to give up his command and accept the commission of Chief Surgeon of his division, which position he held until near the close of the war, when he was promoted to Medical Director of the Western Army. Dr. McDowell was a member of the Middle Georgia Medical Association, of which he was Vice-President in 1874, and President in 1875. Also, he was a member of the Georgia Medical Association, and of which he was President in 1871 and 1872, and a member of the American Medical Association in 1879. He was active and influential in the organization of the State Board of Health, which was organized in 1874. In 1855, Dr. McDowell was united in marriage to Sophrona L. Mays, of Barnesville. His wife and five children survive him. He was a member of the Knights of Honor, Royal Arcanum and A. O. U. W., which secures to his family about $7,000. The business houses in Barnesville were closed until 12 o'clock on the morning of his funeral, and almost the whole population joined in the service and cortege to the Methodist cemetery. J. M. T.

NEWMAN, S. T., born in Mississippi, November 30, 1816, died suddenly of apoplexy at his residence in St. Louis, Mo., July 15, 1883. While a child his parents removed to Kentucky, and he received his education at Augusta College. His medical degree was received from the Transylvania University at Louisville in 1839. He began practice at Amsterdam, Miss., where he resided five years, when, on account of his health, he removed to Richmond, Ky., where he remained till 1856, when he was induced to take up his residence in St. Louis. Here in his new field he acquired a large and responsible practice, and was popular both with the public and the profession. He was a member of the St. Louis Medical Society, and its President in 1860. A member of the American Medical Association in 1873. J. M. T.

WARDER, JOHN A., M.D., born in Philadelphia, 1813, died of paralysis at his residence in North Bend, Ohio, July 14, 1883. He was a graduate in medicine in the Jefferson Medical College, Philadelphia, in 1836. Before graduating in medicine he had removed to Ohio. For years he held the Chair of Chemistry in the Ohio Medical College. He was a prominent member of the American Forestry Congress, and was a writer of note—author of "Hedge Manual," 1858; "American Pomology," 1867; edited *Botanical Magazine and Horticultural Review*, and hass coutributed largely to periodical literature. A member of the Ohio State Medical Society, and, by invitation, a member of the American Medical Association in 1867. J. M. T.

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ORIGINAL ARTICLES.

ADDRESS OF THE CHAIRMAN OF THE SECTIO N ON SURGERY AND ANATOMY—READ TO THE MEETING OF THE AMERICAN MEDICAL ASSOGIATION, JUNE, 1883.

BY W. F. PECK, M.D., OF UNIVERSITY OF IOWA.

In performing the duties of Chairman of the Surgical Section, it is not deemed practicable to encompass all that the organic law of the Association may contemplate. For, in reporting upon the progress made in surgical science, it is recognized that many theories are, at present, announced as facts, which, when experience and demonstration shall have thoroughly tested them, may be eliminated, to perhaps reappear when the cycle of professional experience again completes its revolution.

The greatest progress has been made in operative surgery, although other departments have been constantly receiving new light and attaining results that add to our already extensive accumulations. It is not claimed that large numbers of new operations have been originated and performed, but it is evident, that the better understanding of pathological conditions, has stimulated surgeons to establish a standard for operations hitherto ventured upon in rare and extreme instances only.

In pathology the microscopist has been active in trying to define and locate the germ cause of disease.

Since Cohnheim gave to the profession, in a complete and formulated manner, the character and importance of the colorless corpuscle in pathological changes, strenuous efforts have been put forth by Pasteur, Koch and others to unfold the importance of the bacterian germ which, according to the demonstrations of Oliver, Richet and Mitrophanow, have a normal existence in the blood, lymph and tissues of the body.

Burdon-Sanderson, Chauveau, Watson, Cheyne, Billroth and many others have adduced much information which certainly can not do otherwise than benefit, even though a great modification of the bacterian theory is made necessary.

Certain it is that during the year, there has been developed a strong feeling in favor of Koch's views concerning the bacilli and their alleged tubercular relations. That these peculiar micro-germs exist there can be no longer any doubt.

But whether they are the cause of the tubercle, or whether the tubercle develops *them*, the profession has not made sufficient progress as yet to justify an unequivocal statement.

In Austria there is, existing under the leadership of Koch, a strong belief in favor of the bacilli being the cause of the deposit; while in Prussia, Spina leads the opinion that the bacilli are produced by the tubercle or the associated conditions which originate the tubercular matter.

If the following statement of Spina be true, then there is much uncertainty surrounding the whole theory of bacilli being the cause of tubercle.

"I have examined about 150 mensenteric and omental tubercles in the most various stages of their development according to Koch's and Ehrlich's method, and found bacilli in *not one* case."

The surgeon is much interested in these investigations, because of the important statements made by eminent teachers concerning the origin and nature of some forms of articular disease, also the peculiar degeneration which takes place in bone and glandular structures. The interest does not stop with these tissues; for underneath it all the "germ theory," which is thought by many excellent men to be the greatest of all causes in engendering infections, inflammations, pyæmia, septicæmia, abscess, gangrene, etc., receives a support which, if conceded, will tend to give new and more efficient reasons for the use of antisepticism in practice. Now that so many able and relentless workers are seeking information, which promises greater accuracy, it may be well not to claim too much for remedies which are given with the expectation that they shall ultimately reach the habitation of the noxious germ, and there hold mortal combat and win a victory for further life in tissue which is threatened with decay and death.

It cannot be admitted that practical surgery has thus far been directly benefited by Koch's views.

The condition of the problem of the management of wounds and other pathological processes by means of the so-called antiseptic methods, suggests a move in the direction of greater confidence in the details of operative procedure and scrutinizing attention in extreme cleanliness in the minutæ of practice.

It is difficult, in fact, impossible, to state with precision the exact deviation in the direction of, for or against the treatment of wounds by the different chemical agents during the past year. With many the custom is to believe that antiseptic practice in

surgery means the application of *carbolic acid* in some form of attenuation to the cut or exposed suppurating surface.

Different surgeons have used different substances, but according to the experiments of Dr. A. T. Cabot, of Boston, upon detached dead tissue, it was found that carbolic acid acted more promptly than any other agent in arresting putrefaction and destroying micro-organisms connected with the changes of decomposition.

Within the year the antiseptic methods of wound manipulation have been regarded as embracing the spray, fixed and intimate relations of fresh surfaces, rest, pure air surroundings, and, when practicable, drainage.

It was stated by Thornton that the principal danger which surrounded the opening of the abdomen was from the action of the vicious bacteria. And Spencer Wells' unprecedented(?) experience in ovariotomy is referred to by Marcy as furnishing almost incontrovertible evidence in favor of the antiseptic practice.

In this connection the experience of Mr. Lawson Tait, where he reports 100 successful ovariotomies with but three deaths (none of the antiseptic precautions having been regarded), should also be remembered by those who can only see progress and success in treating wounds on the anti-germ plan.

Certainly the new experience of Billroth and Esmarch is commendable, and should be gratifying to those eminent operators. But it cannot be successfully argued that the lessened mortality was alone due to the use of antisepticism, as practiced by Lister. It will be immediately asked, how else can these alleged great changes in practice be explained?

If everything that is used to keep a wound clean, and to ensure thorough drainage, is called antiseptic practice, then no adequate explanation can be offered.

Is not the experience of Mr. Keith as wonderful as the tabulations of the Vienna and Keil surgeons?

The experience of the English surgeons, on duty with the British troops in Africa during the Zulu and Transvaal wars, was such that the antiseptic management of wounds was commented upon with but little favor after the records of those campaigns were finally submitted.

The rather short campaign in Egypt was characterized by great dissatisfaction in the beginning of the war. But after the surgical management had become thoroughly organized and freed from abuses, observations were made by good men who had only good reports to make of the antiseptic practice, which was very generally employed.

While it is admitted that most of the leading surgeons of England are thoroughly wedded to the practice of antiseptic treatment of wounds, there are to be found not a few excellent teachers and operators, who most reverently believe that nature, under wise assistance from the surgeon, will do more to save limb and life than the surgeon can do, who depends upon restricted antisepticism. The writer has opened the abdomen, in all, forty-eight times. In forty-six instances for the removal of ovarian growths, once for an adherent ovary and once for an intestinal obstruction. In the first fifteen cases there were six deaths. The operations were made under the spray and the wounds were treated with a carbolic acid solution. In the remaining thirty-one ovarian operations, also in the oöphorectomy, and in the case of laparotomy, the spray was not employed. The last two mentioned cases recovered, and out of the ovariotomies there were four deaths. Has it occurred to those who are strong in their advocacy of the antiseptic treatment of wounds that in the United States there are in active practice among the 52,000,000 of inhabitants, about 86,000 medical men, a very large number of whom are treating wounds and pathological lesions? Also that many of the wonderful results accomplished by these numerous surgeons are wrought, not by means of the spray and carbolic acid, but by the extraordinary care and attention which are given their cases.

Those who write for the periodicals and report results in practice are very few, unfortunately. The major operations are being performed in many apparently out-of-the way places, and results are being achieved which would receive the encomiums of the renowned in our ranks, did they but know where, and upon whom, to bestow them. It is apparent that the "lost art" of blood-letting, in the treatment of inflammation, is being reclaimed, and its induction to a legitimate position among other remedies of conceded value is fast taking place.

Besides reasons derived from clinical experience, Dr. Nancrede, of Philadelphia, has observed and demonstrated that an accumulation of the oxygen-carriers in the beginning of inflammation overloads the parts with *oxygen*, which stimulates unusual amœboid action of the colorless corpuscles, thus favoring cell migration. The lymph spaces, through which excessive accumulations of liquor sanguinis is directly returned to the blood, become blocked, and as a result cell proliferation and stasis takes place. Cell nutrition is prevented. Direct withdrawal of blood, when performed sufficiently early, unstops the lymph spaces, unloads the oxygen, and re-establishes a circulation, which can carry on physiological nutrition.

Among the many new and important instruments which have been presented may be mentioned the universal or compound racket joint which has been offered by Dr. Stillman, and which can be adjusted at pleasure, and permitting of universal motion. Perhaps one of the most important steps that has been taken, is the utilization of the electric light, both as a means of diagnosis and as an aid in making operations in cavities and places where natural light can be used with uncertain effect.

The instruments invented by Leiter, of Vienna, and Dr. Nitzel, of Dresden, some of which have been well described by Dr. Roswell Park, are well calculated to assist in causing much progress in the next decade.

Dr. Thomas Oliver opened an abscess of the liver, and then placed the electric light within the cavity, thus defining with great certainty and satisfaction the size of the cavity and the thinness of the abscess wall, on which he states he saw "a greyish red condition of the wall of the cyst, studded across which

were numerous yellow-white spots, evidently pus. A slight oozing or sweating was also noticed on the wall of this cavity." For the attainment of this remarkable achievement he employed Swain's lamp, which in size is no larger than an ordinary bean. The interior of the bladder, pharynx, larynx, œsophagus, stomach, and ear have been illuminated, thus suggesting the possibilities in waiting for experimental art.

Prof. Graham Bell has repeated his experiments with the induction balance, and has made decided progress in *locating* metallic substances in the tissues of the body. Not only has he utilized the electric current to *locate* the *lead*, but he has demonstrated the possibility of determining the distance of the substance from the surface.

His reports are very interesting, and for a full description of his ingenious instruments they must be examined.

In the direction of exploration and diagnosis of intra-vesical pathology, Sir Henry Thompson has offered some very valuable information. He makes a "limited incision" in the membranous portion of the urethra, and with the index finger passes along the track of the separated urethra to and through the neck into the bladder, where, by the aid of supra-pubic pressure, a free and satisfactory exploration of the cavity and walls is permitted.

This method he has employed in thirteen cases, and has removed five tumors, the location and nature of which could not have been so well determined in any other manner. He also reports a case in a female, where he, by dilating the urethra, succeeded in diagnosing and removing a polypoid growth.

The year has greatly added to our previous meagre knowledge of surgical procedure in intra-abdominal pathology.

The statistics furnished, by reason of abdominal sections, are becoming increasingly valuable, because they show that less hazard is encountered in attempting to extirpate tumors, malignant growths, and in removing the causes of intestinal obstructions than was formerly supposed. The operation for removing a portion of the stomach or its duodenal connection may be said to have been legitimized by the experience, much of which has been furnished by the surgeons of continental Europe, since our last session.

It is not intended to convey the meaning that gastrotomy is an operation of very recent origin, but rather to state that the feasibility of its commendable performance has been mainly proven by the experience collected during the interregnum of the Association.

Dr. Troquart states that there have been performed in all, since 1879, so far as public announcement has been made, twenty-nine pylorectomies and gastrotomies, thirteen of the operations having been made before January, 1882, and during that year.

Up to January, 1883, there have been performed seven additional operations, making in all thirty-six operations for the removal of some portion of the stomach or duodenum for cancer, gastric ulcers, inflammation and destruction of colon.

Three of the operations were for ulcers, and the remaining thirty-three were supposed malignant deposits.

From the information within reach, there were four recoveries, all of the remaining cases dying within ten days, except one case (Billroth's), which died at four months. Unless the greatest discretion is shown in the selection of cases for operation, the mortality can not be otherwise than very high.

No less an authority than Billroth states that not more than one case out of fifty is suitable for operative interference. Evidently his opinion has a good retrospective support, when the statistics of Gussenbauer and Van Winiwarter are considered. They state that after having examined 903 cases of cancer of the stomach in the Pathological Institute in Vienna, that there were 542 cancers of the pylorus, 370 of which had adhesions of greater or less extent to the contiguous organs.

Thus far the majority of the operators prefer to reach the pylorus by making an incision in the median line. There are two very important questions to be answered in connection with this operation.

First. If the cancer, for which nearly all the operations are performed, is due to a general cause, can the surgeon expect the patient to receive other than temporary relief from the operation?

Second. Will the aggregate life in those cases, when the operation is successful, be greater than it would be in those cases who die as a direct result of the operation?

The history of recurrence of cancer of the stomach is yet to be studied in its relation to removal by operation. But it is hoped, that a justification of the operation will only be based upon an experience that the average pathological life is longer with the operation than without it.

Laparotomy is an operation which is progressing with much favor in America and France. Since ovariotomy, with its many complications and risks, is becoming rather common, the opening of the abdomen to relieve intestinal obstruction, the result of temporary misplacement of the bowel, or from the abnormal location of the products of inflammation, is not only inviting, but operators, who have had experience in making ventral sections, proceed with less hesitation to search within the abdomen for arrested alimentary action.

As experience increases it will no doubt be shown that the tissues involving the cœcum and its contiguous relations are much oftener the seat of morbid changes, resulting in unabsorbed deposits, than is ordinarily supposed. In fact the lymph exudation and fibrinous adhesions—the result, perhaps, of an unrecognized local inflammation—may serve, in an indirect manner, to not only impair nutrition but directly imperil the life of the organ and possibly that of the body.

The physician explains that the costal and pulmonic surfaces of the pleura may be adhered to each other and, in this way, unfavorably affect the functions of respiration. The same statement may be occasionally given of an allied pathological condition existing within the abdominal cavity, and particularly near the ilio-cœcal region.

The following cases have an important bearing upon the foregoing allusions :

Ole Johnson, male, æt. 24, single, Norwegian, country merchant. He resided on a farm until 1874, since which time he has been occupied in a general store. His physique was slight, and general health only fair. In 1869 he had an attack of typhoid fever, but recovered with about the same average health. On May 24, 1882, he complained of feeling unwell, experiencing slight pains in the abdomen, with a sensation of nausea.

In the morning of the same day there occurred a profuse spontaneous action from the bowels. On the early morning of May 31 the pain sent him from his bed at 4 o'clock. He walked the floor, occasionally vomiting, but could not obtain relief by taking "hot drops" and brandy, domestic remedies which were near at hand. So at 8 A.M. Dr. Fitzgerald, of Grand Mound, was called, and observed anxious countenance, more or less pain, though not severe, temperature 99 deg., pulse 100 and rather weak, frequent efforts at vomiting, which act occasionally succeeded in producing a ropy mucus. He gave a hypodermic injection of morphine, which relieved the pain for a short time, and influenced a kind of restless sleep for only one hour, when the same treatment was resorted to again. Efforts were made to evacuate the bowels by injections, but without success. A long tube extending to the transverse colon was used, but the fluid did not bring away fecal matter. Cathartic medicines were moderately administered, but no movement could be obtained. On May 29 the patient's symptoms continued much the same, there being pain in hypogastrium, with slight tympanitis, pulse 110, soft and rather weak; stomach restive, with occasional efforts at vomiting, countenance and surface indicating decided nervous depression. Temperature not taken. Nothing passed the bowels.

Morphine continued as before. May 30 condition unchanged, except that systemic depression was becoming still more marked. On May 31 the patient showed decided prostration; eyes lusterless and of slow movement, stomach restless and occasional hiccoughing, pulse 120 and weak, temperature 100 deg., respiration 24, abdomen slightly tympanitic, but *not* particularly sensitive upon pressure; bowels unmoved.

Consultation recommended opening the abdomen to ascertain the cause of the obstruction, with a further view of dislodging it if possible. Accordingly at 6 P.M., by means of kerosene light, the operation was made by making an incision in the median line, from one inch below the umbilicus to within one inch of the pubis, and thus entering the abdomen. A considerable portion of the colon and small intestines were removed, when nothing unnatural was found. I passed my right hand down to the region of the right iliac fossa, where I found a portion of the ileum imprisoned, and not at all tractable. Upon more close and minute inspection I discovered that the appendix vermiformis had, at its cœcal extremity, become adhered, and was very firmly attached to the fascia and tissues covering the last lumbar vertebra on its right lateral body. A portion of the ileum had passed under this adherent appendix and ascended on both sides, so that the vermiformis acted as a *stricture*, preventing the passage of the contents of the bowels. The peritoneum and peritoneal surface of the ileum gave but little evidence of inflammation. The appendix could not be separated from its vertebral location without running a risk of making more or less of a lacerated surface of the adherent tissues, so I with common silk passed two ligatures around the appendix, one each side of the centre, and then divided it. From the free ends I expressed in amount from ten to twenty drops of soft pultaceous material, after which the parts were carefully sponged and the intestines and abdominal cavity well cleaned, and the opposing surfaces of the wound were brought together with great difficulty, on account of the lateral retraction of the thin tissues.

The parts were maintained in position by means of silver wire sutures, the abdominal walls being too short for the use of ovariotomy pins and superficial sutures of silk. Over the wound was placed absorbent cotton and a bandage. The subsequent treatment consisted of milk and undisturbed dressings. The pain required but little morphine. The bowels moved spontaneously in 73 hours after the operation. Sutures removed in twelve days, and on the 20th of June he rode 12 miles in a buggy, considering himself *well*. The patient's health has been much better since the operation than it ever was before, and he has gained largely in flesh, weighing 120 pounds before operation, now weighs 135 pounds, and looks florid and healthy. The appendix must have been thus abnormally placed in childhood, or maybe when he had typhoid fever.

Still further illustrative of progressive abdominal surgery may be cited a case similar to the above, being operated upon and published by Leon LeFort, of France :

In June, 1882, he was called to see a young man 18 years of age, who in the evening of May 25, 1882, was seized in the abdomen with severe pain, and about midnight the pain became more like colic, for which Dr. Tachard gave laudanum and belladonna, together with the application of hot poultices, some relief therefrom being received. The succeeding day (May 26), the pain increased, and accompanying it there was special sensitiveness of the abdomen, also some tympanitis. Castor oil was given but was immediately vomited, no evacuation of the bowels could be encouraged, but vomiting and retching became incessant.

There existed a small left inguinal hernia, which played no part, however, in the case; it being returnable at pleasure and without difficulty. It also appeared that three years before there existed peritoneal inflammation. No relief being received from the different kinds of treatment employed, and on June 1 decided typhoid symptoms—such as are seen immediately preceding dissolution—appearing, an incision about fifteen centimeters in length was made from just above the pubis to near the umbilicus. The intestines bubbled out and were carefully examined, coil by coil, and then returned. Upon meeting with slight resistance when making traction upon a portion of the ileum, the hand was passed along the bowel to

the right iliac region, where he found a constricting ring or band of fibrous tissue, which was thick, formed of organized adhesions and encircling the small intestines for a distance of five centimeters from the cœcum. The width of the band was five millimeters. The constriction was divided by means of scissors and the intestines liberated. There were some evidences of congestion, but no decided inflammation, the life of the tissues not having been compromised.

The parts were thoroughly cleansed and returned, and seven deep silver wire sutures were passed through the tissues and fastened on the opposite side by a bougie. Superficial sutures were employed to coapt the surface edges. In the night of June 1 the patient had a spontaneous evacuation from the bowels.

On the seventh day the patient subjected the abdomen to undue exertion, when the superficial sutures gave way; they were replaced, and thereafter uninterrupted recovery followed. On July 1 he was well. General management of the operation was unantiseptic. Health seven months after operation much better than previous health, also loss of inguinal hernia.

Prof. Pietro Loreta, of Bologna, has performed a new operation upon the stomach for stenosis of the pylorus—a result of unmalignant ulcerative inflammation. The operation has in view the stretching of the constricted portion by the fingers. The number of operations thus far performed are four, with two recoveries. The steps of the operation, as reported by Dr. Harris, are to reach the stomach, and then, mid-way between its two curvatures, make an incision through the wall, beginning one and one-fourth inches from the pylorus, extending two and three-eighths inches toward the cardiac end. The index finger of one hand is then introduced within the cavity and carried within the stricture. The corresponding finger of the other hand follows the finger already introduced and is caused to pass through the orifice, the dorsal surface of each finger being in opposition; the stricture is then stretched. The serous surfaces of the stomach are then united by continuous sutures, thus slightly inverting towards the cavity the edges of the wound.

We understand that such an adaptation of the wound precludes the possible escape of the contents of the stomach. It will be at once conceded that a critical study of the history of any given case must result in an unequivocal diagnosis, which, when made, may finally necessitate a pylorectomy for carcinomatous deposit.

Future reports of this operation will be looked for with great interest. While your attention is upon the operative part of abdominal surgery, I wish to ask you to consider at least one of the causes of fatality. It sometimes happens that when no satisfactory clinical reason exists for an untoward result, the patient unexpectedly and rather suddenly dies. Not a few explanations, such as shock, acute septicæmia, etc., have been offered, but I feel assured that neither the direct nor ultimate cause is always found in these assumptions. The following case is both interesting and illustrative: B. J., æt. 19, single, native of Iowa. In 1880 there began to develop in the right iliac fossa a tumor, which, in the early part of January, 1883, I diagnosed as being a multi-locular ovarian cyst. On February 23 I operated in the usual manner and removed a multi-cyst, weighing, approximately, twenty-five pounds. Each vessel of the broad pedicle was separately tied and the membraneous surfaces brought together and sewed over the vessels thus secured. The abdominal cavity and external wound treated in the customary manner. She recovered well from the depression of the operation. The temperature was 99, pulse 102; she complained of wanting more air, desiring the windows raised. At 7:30 P.M., pulse 102, temperature 100½ degrees. Same feeling about insufficiency of air, and spasmodic breathing unabated; 10 P.M., pulse 106 and full, temperature 101 degrees.

Quite restless, and wanted something done for her breathing, although the windows were well open. Some tenderness in left iliac. Aq. ext. opi. suppository 1 gr. given.

February 24—Restless night, symptoms of difficult breathing continued. 7 A.M., pulse 124, weak; temperature 103½°. 12 M., pulse 140, weak and small; temperature 103 1-5°. 4 P.M., pulse 140, weak and small; temperature 102½°. Died at 5 A.M., February 25.

Throughout the case unrelenting efforts were exercised to maintain the strength by both oral and rectal alimentation.

Post-mortem examination made nine hours after death. The seat of operation was found in a perfectly satisfactory condition—no foreign material of any kind was discovered inside of the abdominal cavity. All of the organs were healthy, with one exception, viz., in the right ventricle of the heart there was a large, white fibrinous (ante-mortem) clot. The question raised by this case may be the means of introducing an interesting subject for discussion in the Section. What was the cause of the blood clot? What influence permitted the separation of the fibrine from the other constituents of the blood?

The kidneys were not examined before the operation. Had they been interrogated, and had albumen or casts been found, I do not feel inclined to admit that such discoveries would have necessarily deterred me from making the operation. At present the attention of the profession is being particularly called to the kidneys in relation to operative surgery, and doubtless there is ample room for a profitable interchange of opinions and experience.

To what extent defective organic action, associated with anæsthesia, is due to the insufficient vitality of the blood, careful future observation only can determine. It is not enough to say that, in any given case, death occurred as a result of fibrine collection on and around one or more of the heart valves.

There must be a further cause which influences the dyscrasial condition of the blood. Some very interesting observations have been made by M. Segond, concerning the blood-vessels, blood supply and nutrition in limbs upon which amputations have been performed. His statements are somewhat at variance with the opinion hitherto recognized as conceded, since his demonstrations have shown that the diminu-

tion in the size of vessels does not cease when they reach the first important division, but go on decreasing in size and calibre in the entire limb and *beyond* toward the primal distribution. Coincident with this atrophic change all of the tissues, including nerves, bone and lymphatic glands decrease in size and weight, and correspondingly there is lessened function. It was also shown by M. Poncet that in a case of amputation of the leg the femoral artery was, within a peperiod of ten days, markedly diminished in size. It was not, however, observed that the walls of the vessels showed any shrinkage. Whether or not these important changes have their beginning in the blood, heart or cerebrum, remains to be determined.

Dr. David Newman, of Glasgow, has performed the operation of nephoraphy, it being the first operation made in England, upon a woman for floating kidney. The renal capsule was stitched to the margins of the incision, and deep button sutures were passed through the kidney substance, thus fixing the organ in its natural position. The patient recovered and is now well.

Dr. William Thompson, of Dublin, has added another case of ligature of the innominate artery, the patient living 42 days.

It will be observed that but three of the recorded cases (Grafe's and Cooper's), including Smith's, which recovered, lived longer than Thompson's.

Dr. Arthur E. Baker, of London, has proposed and practiced a novel and apparently successful operation for varicocele.

After washing the scrotum thoroughly he separates the veins of the cord from the vas deferens, and then passes a needle threaded with twisted silk behind the veins, after which the veins are permitted to drop back, when the needle is returned in front of the veins, which are thus secured in the loop of the ligature, through the original opening. The thread is then made tense and the veins are brought close to the wall of the scrotum, and the ligature is well tied, cut close to the knot, and then allowed to return with the veins to the scrotal cavity.

This operation differs from a similar operation recommended by Dr. Gross in two particulars. First, the ligature is silk and carbolized. Second, the strangulation of the veins is exclusively intra-scrotal. The results reported are such as to commend a further trial of the operation.

Two interesting and remarkable operations have been made upon the sternum and its contiguous relations by Dr. Keuster, of Berlin, and Prof. Köenig, of Gottingen.

Prof. Köenig's case was one of sarcomatous growth of the sternum, a considerable portion of which had to be removed. In the operation it was found that the sarcoma had become adhered, more or less, to the post-sternal tissues, including the pericardium. In the exercise of the necessary force in separating the adhesions and inter-communicating tissues, both pleural sacs, also the cavity of the pericardium were freely opened. The wound was dressed antiseptically. On the twelfth day it was discovered that one of the flaps had become gangrenous, and underneath, the process of suppuration was going on; so much so that the imprisoned matter was forced within the pericardium, thus freely surrounding the heart. The patient made slow progress, but recovery finally occurred.

Dr. Kuester's case was one of supposed sarcoma. The patient was forty years old, and had a tumor about the size of a goose-egg, situated at the sternal ends of the cartilages continuous with the third and fourth ribs. The tumor was rather elastic but not movable. It passed between the cartilages, and seemed to have an undefined distribution within the thorax. Gumma and aneurism were both eliminated. The operative procedure, made Oct. 27, 1882, consisted in dissecting the skin and cellular tissue from the tumor; commencing the incision on its inferior margin. The next step was in dividing the third and fourth cartilages and chiseling away one-half of the breadth of the sternum. Thus removing the sternum and rib connections, the tumor was discovered to have a prolongation extending well down into the anterior mediastinum, where there was seemingly a basic attachment. In the effort at separation of the tumor from the deeper tissues, the right pleura was opened and the internal mammary artery was divided.

The artery could not be reached for a time, so the hæmorrhage was arrested by acupressure. It is also stated that when the cavity of the pleura was invaded the lung collapsed. The patient recovered rapidly from the results of the operation, and no doubt will recover ultimately from his syphilitic pathology.

These cases are illustrative of bold and scientific manipulation, and at the same time they indicate how nearly a dexterously handled knife and finger may reach the vital organs of circulation and respiration without compromising life. We will not discuss whether either of the operations were absolutely necessary, but content ourselves that progressive surgery is demonstrated in their performance.

Important additions have been made to our surgical literature in monographs, revised editions of some of the leading text books, and, in America, the profession may be congratulated upon the appearance of two important volumes—one in surgery and one in anatomy.

Under the supervision of the Surgeon General's office, the late surgeon, George A. Otis, began the surgical history of the Rebellion.

He lived to render his name long famous by completing the second part and beginning the third part of volume second, of this great and incomparable history. While Dr. Otis' untimely death was a great loss to surgical science, the head of the army surgical department exhibited excellent taste and manifested wise judgment in appointing Surgeon D. L. Huntington to continue and finish this great work. The duty has been well performed, and the world is now in possession of the most complete record of wounds and injuries resulting from war and battle that has ever been produced.

A few references cannot but be interesting to both army and civil surgeons. The whole number of wounds reported were 253,142, and out of this number there were 89,528 connected with the lower extremities; 59,376 being flesh wounds, 674 being

classed as incised or punctured wounds. The 30,152 were gun-shot fractures, and specially located as follows :

Femur, including complications of hip-joint	7,776
Fractures of tibia and fibula (shafts), single or double	10,026
" complicating knee-joint	3,557
" involving tarsus, metatarsus, and phalanges	8,793
Total number	30,152

The relation which 89,528 sustains to the whole number shows that 35.3 per cent. were wounds of the lower extremities, an experience comparing very closely with the percentages furnished by surgical reports of wars and campaigns in other countries. It is shown that in 3.4 per cent. of the cases both lower limbs were injured. The left in 53.1, and the right in 43.5.

The collected number of amputations at the hip-joint were 66, the recoveries being 11, thus furnishing a mortality of 83.3 per cent. Of the 25 primary amputations there were 3 recoveries. Intermediary amputations, there were 23 cases and no recoveries ; secondary amputations, there were 9 cases and 2 recoveries, and of the re-amputations, 9 cases with 6 recoveries. There were 33 cases of primary excision of the hip-joint with but one recovery, and of the secondary excisions of the hip-joint there were, in all, 11 cases with 3 recoveries. It is stated that about 60.6 per cent. of the cases of gun-shot injuries of the knee-joint complicating bone were fatal. One-fourth of the whole number were not treated by operative interference.

Dr. Harrison Allen, of Philadelphia, has produced a part of what promises to be an excellent treatise on human anatomy, including medical and surgical relations. Already there has appeared four parts, the fifth and sixth parts to be ready for distribution by October 1.

A real and most substantial advance is being made in surgery in connection with railway corporations. Many of the leading lines have introduced into their system of management surgical departments, the object of which is two-fold: First. It enables the company to more economically manage its financial affairs. Second. It ensures to those who may be unfortunate enough to receive injuries, the certainty of receiving the most complete surgical skill. The ultimate benefits which are certain to accrue to the profession are the accumulation of a vast amount of statistical information which will be of great service in neural pathology. Because it is a well known fact that many cases, the result of alleged railway accidents are finally subjected to judicial proceedings, when the statements of the plaintiff are too often believed by the jury, when the allegations are not sustained by the systematic expressions of injured tissues and organs.

The instances are exceedingly rare where real pathology, the result of accident, does not fail to receive corresponding endorsement by the surgeon. On the other hand, the surgeon often finds himself unable to satisfactorily interpret the unharmonious descriptions of symptoms furnished by the person who sees a monied equivalent at the end of a well established "concussion" (?) of the brain or spinal cord. After the rendering of a judgment, and the payment by the defense of assessed damages, the most marvelous and previously stated permanent disabilities recover under questionable circumstances.

The retransformation of fat cell into normal glandular structure (!), the rapid change of atrophied and wasted nerve filament into normal tissue (!!) occurs with inconsistent rapidity, and the teachings of histologists and pathologists are abrogated and special therapeutics, of miraculous origin, receive praise and credit which can but cause science to blush.

The surgical bureaus of these corporations will, by their collected experience and tabulations, be qualified so as to be able to furnish much valuable information to both judicial and popular tribunals. Then justice to pathology and rewards to individuals will receive fairer and more honorable administration.

THE REALITY, MECHANISM, AND DIAGNOSTIC SIGNIFICANCE OF DIMINUTION OF RETARDATION OF THE PULSE IN AORTIC INSUFFICIENCY.

BY A. T. KEYT, M.D.

[Read to the Section on Practice of Medicine and Physiology.]

Dr. Hendérson[1], in 1832, first emitted the idea that the interval between the heart's impulse and the arterial pulse is prolonged in aortic insufficiency. Since him others, and among them the principal authorities on diseases of the heart, have accepted the view. Flint says "that it characterizes certain cases in which the regurgitation is excessive, is not to be denied[2]." Walshe writes: "This retardation may, with care, be detected in many, but unquestionably not in all, cases of that disease. Possibly, where no morbid retardation can be discovered, the failure may depend not on its absence, but on its being carried to such extremes that the arterial pulse produced by one cardiac systole is nearly synchronous with the next[3]." As late as 1877, M. Tripier, in a publication[4], advocated the reality of this exaggerated delay of the pulse in aortic insufficiency.

The observation appeared incontestable. The hand perceived the shock of the heart, and the finger the radial pulse, the interval between the events being noted as much longer than in health. And the explanation of the accepted phenomenon came with show of reason, through the reverse arterial current and lowered arterial blood-pressure (classical) of free aortic regurgitation. The view of an abnormal delay of the pulse, thus supported by observation, reason, and authority, seemed an established fact in the clinical history of this lesion.

Nevertheless the idea is wholly erroneous, and the pulse, so far from being unduly retarded on the systole of the ventricle, is really greatly precipitated on that event in large aortic insufficiency. Correction of the prevailing error, and demonstration of the true chronometric relationship between the heart and pulse, is due to the graphic method. Traces of the heart and an artery taken simultaneously, show neatly

[1] *Edinburgh Medical and Surgical Journal*, Vol. xxvii, 1832.
[2] Flint's Diseases of the Heart, 1859, page 141.
[3] Practical Treatise on Diseases of the Heart and Great Vessels. American edition, 1862; page 72.
[4] *Revue Mensuelle*, t. per, p. 19.

the beginning of cardiac systole and the beginning of the arterial pulse, and the space separating these beginnings marks definitely the interval between the events. Thus the normal interval between the heart and different arteries being ascertained, the modification of the interval by disease is readily noted.

In this manner Francois-Franck experimented on patients affected with aortic insufficiency, and first

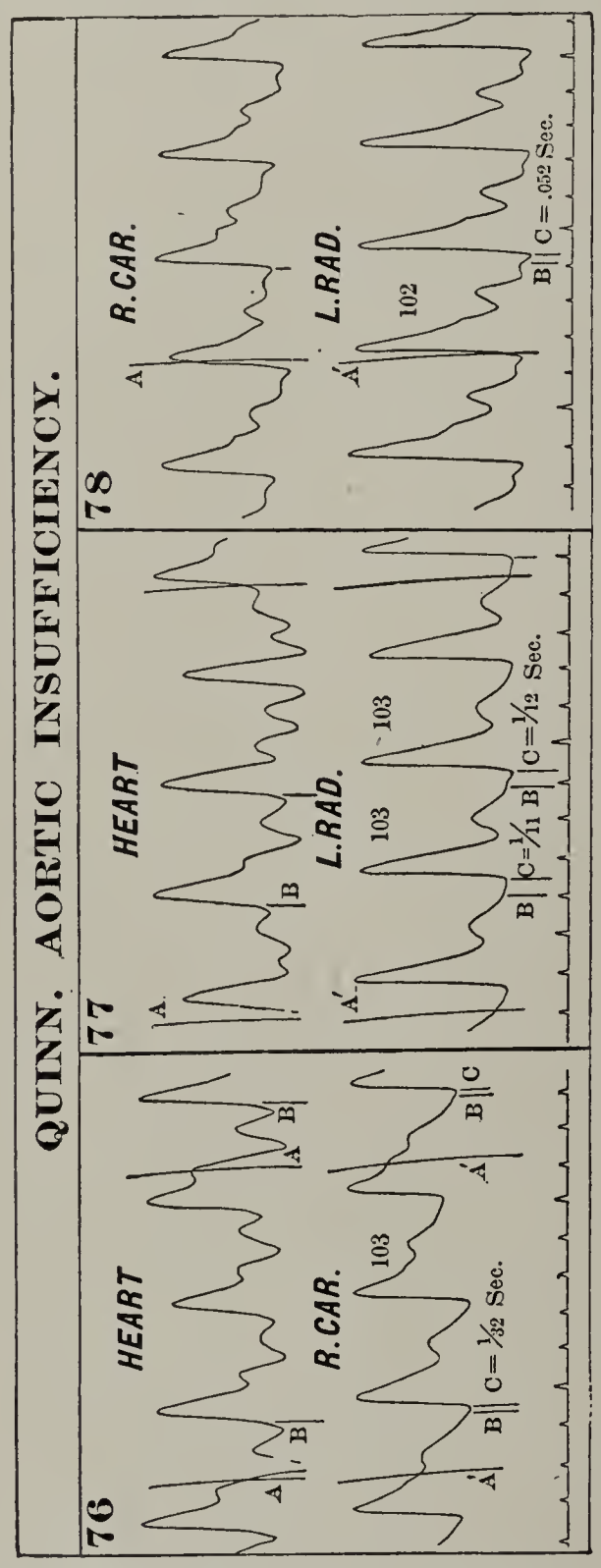


Fig. 1.—Simultaneous traces in a case of large aortic insufficiency, showing abnormal shortening of the cardio-carotid and cardio-radial intervals.

presented his results to the *Société de Biologie* in March, 1878. He formulated thus the conclusion of his researches: "*In large, pure aortic insufficiency the retardation of the pulse on the beginning of the systole of the heart is very notably diminished.*" Cotemporaneously with Franck I also was studying, independently, by means of the simultaneous graphic method, the influence of different forms of valvular disease on retardation of the pulse. I had demonstrated that the pulse is abnormally delayed in mitral insufficiency, and reflecting as to whether this delay might be contravened by any concomitant condition, I arrived at a conclusion which was afterwards published in the following words: "Nevertheless, the phenomenon, though constant in pure mitral incompetency, will probably be found wanting in cases of this lesion complicated with an open state of the aortic valves; for in the latter condition the base of the arterial column rests against the sides of the ventricle, instead of against the aortic valves, and is advanced with the first movement of ventricular contraction, thus insuring a short interval between cardiac systole and arterial expansion. * * * The idea that aortic insufficiency produces delay of the pulse is certainly erroneous[1]."

In March, 1880, opportunity presented for tracing a case of undoubted aortic insufficiency. The result is shown in figure 1[2]. The cardio-carotid interval measured only 1-32 second, and the cardio-radial 1-12 second.

Still referring to my own researches, I have proved diminution of delay of the pulse in other cases of aortic insufficiency, and have been able, also, to reproduce the same result on the schema. By way of illustration, simultaneous tracings from the schema are here presented. Fig. 2 shows traces from the ventricle and aorta, with valves intact. The impulses were given to the ventricle at successively increasing arterial pressures. It will be noticed that after the first pair of waves, at which the pressure was in equilibrium and the waves are synchronous, the interval between the ventricular impulse and arterial wave increases with the arterial pressure. Thus, with the

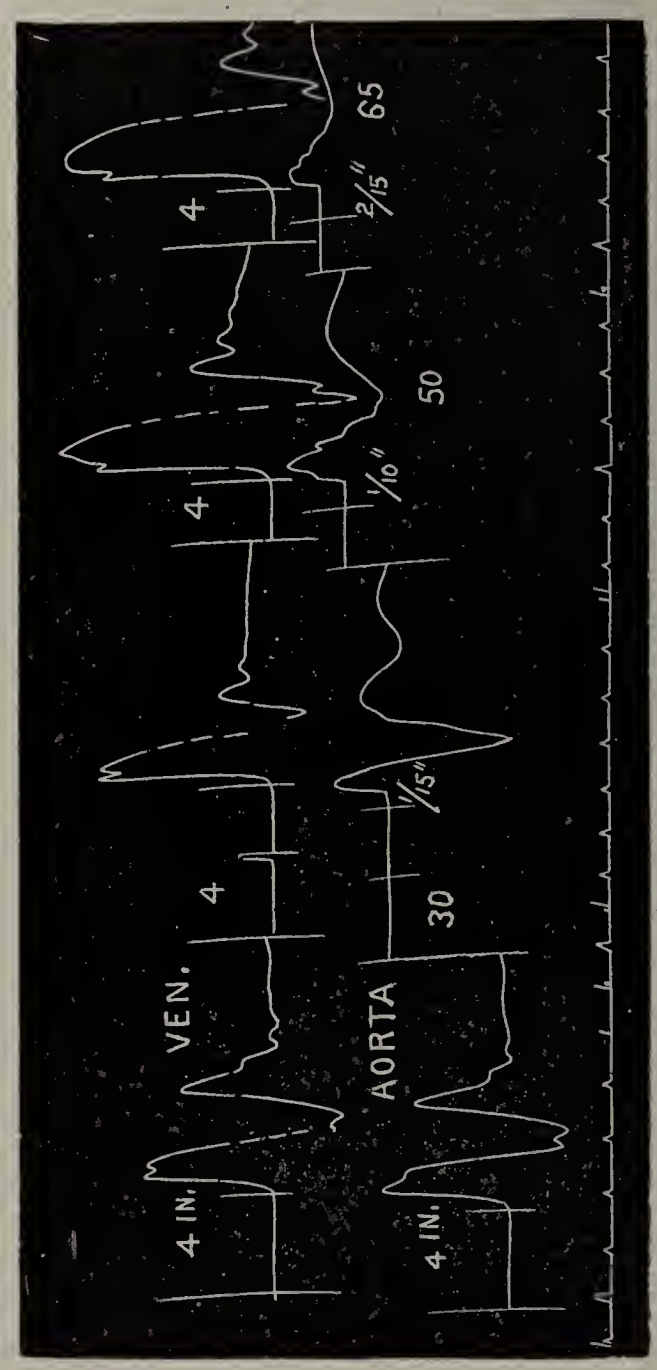


Fig. 2.—Simultaneous traces from the schema, with valves intact.

pressure at 30 inches (water manometer), the interval is 1–15 second, at 50 inches 1–10 second, and at 65 inches 2–15 second. These traces represent normal

[1] *Cincinnati Lancet and Clinic*, March 22, 1879.
[2] *Boston Medical and Surgical Journal*, September 30, 1880.

action and lengthening of the cardio-arterial interval under augmentation of arterial pressure.

Fig. 3 shows the result of a repetition of the same experiment, only with the important difference that the traces were taken with the aortic valve removed, in representation of large aortic insufficiency. Here

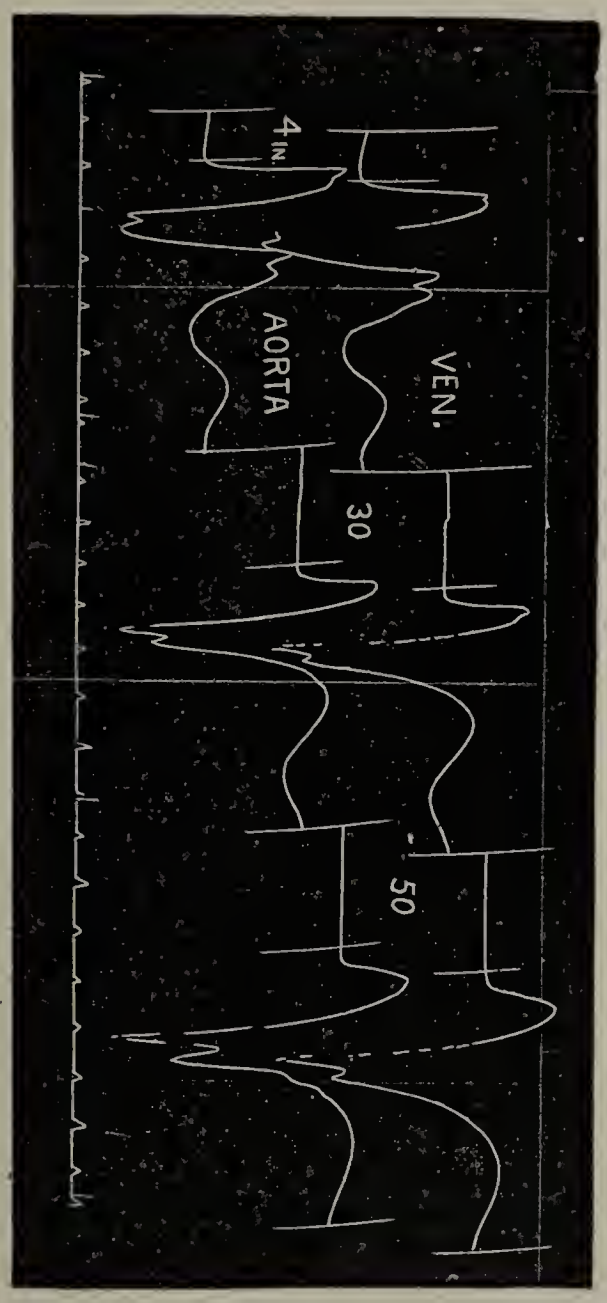


Fig. 3.—Simultaneous traces from the schema, with aortic valve removed.

the ventricular and aortic waves are synchronous throughout, and, besides, show a perfect parallelism of form.

Franck also experimented on animals, producing in them artificial insufficiency of the aortic valves, and proved the same diminution of the pulse-retardation observed as in man.

Thus experiments on man, on animals, and on the schema all concur in proving diminution of delay of the pulse in aortic insufficiency. The testimony is ample and complete, and establishes the fact beyond question. The acquisition is one of the triumphs of the graphic method, and affords a striking illustration of its power to redeem from error which otherwise had been perpetuated, and reveal the truth which otherwise had not been known.

THE MECHANISM OF THE PHENOMENON.

Our next inquiry relates to the mechanism of the phenomenon. The conditions concerned that influence the measure of the delay of the pulse are, (1) states of arterial blood-pressure; (2) states of the arterial coats as to elasticity or stiffness; (3) modes of ventricular contraction; and (4) relative states of ventricular and aortic blood-pressure.

1. It has been found that, other things being equal, the rate of propagation of the pulse wave tends to increase with increase, and decrease with decrease of arterial blood-pressure. Recent investigations, however, show that such modification from such cause is small at best, and frequently fails to manifest. In aortic regurgitation the mean arterial pressure is usually diminished, yet not unfrequently, when the lesion is well tolerated, the pressure maintains, or even rises above, its normal level. This cause, then, of modification of pulse transmission, would operate either against, or inadequately for, the production of the greatly abbreviated interval.

2. No fact in this relation is better established than that the velocity of the pulse wave is proportional inversely to the elastic extensibility of the arterial walls. In aortic insufficiency great expansion of the arterial walls is a notable phenomenon. This is due to the enlarged and hypertrophied ventricle sending into the arterial system at each systole a large volume of blood, which distends the vessels, and in diastole escaping backwards permits corresponding retreat of the walls. The walls themselves may not be more relaxed or extensible than ordinary, and the fact is the coats are often pervaded with atheromatous material, rendering them less yielding than in normal condition. However, in the absence of indurative changes, the parieties under the strain become dilated and thinned, and more yielding, unless fortified by developing hypertrophy of the muscular layers. Then no constant stiffening of the arterial walls obtains in aortic insufficiency on which can he predicated the very early appearance of the pulse in this lesion. But even if the walls were of brass, this cause of quickened transmission could not of itself account for the great precipitation of the carotid pulse, inasmuch as the reduction considerably exceeds the entire transmission interval between the heart and carotid point.

3. The mode of ventricular contraction, as quick or slow, exerts a marked influence on the amount of delay of the pulse. My own recent experiments have shown this, but they have also shown that the modification is confined alone to the presphygmic interval of the systole of the ventricle. Contrary to the conclusion of some other observers, my results demonstrate that the velocity of the pulse-wave is not in the least modified by the quickness or slowness of ventricular contraction. The ventricular presphygmic interval is notably shortened by a quick and lengthened by a slow contraction of the ventricle. In aortic insufficiency, although the coexisting hypertrophied left ventricle contracts with corresponding energy, there is no evidence that its initial systole is quicker than in normal action. Then mode of systole, notwithstanding its modifying potency, cannot certainly be invoked in explanation of the phenomenon in question.

4. It is the excess of blood-pressure in the aorta over that in the ventricle at the beginning of systole that measures with certainty the interval between the beginning of ventricular contraction and that of the aortic pulse. When the aortic valves are intact this interval lengthens with increase and shortens with decrease of this excess; and if the pres-

sures should be in equilibrium the two events will begin simultaneously. (See fig. 2.) But when the aortic valves are permanently open the pressures in the ventricle and aorta are always in equilibrium at the beginning of systole (the two cavities being in one), whether the mean pressure be low or high. In consequence of this oneness or equilibrium of pressure the heart's impulse and aortic pulse will be synchronous. (See fig. 3.)

The transmission interval between the aortic orifice and point of observation of the carotid pulse is comparatively short, not averaging more than half the duration of the cardio-aortic or presphygmic interval. Thus, by my measurements, the first averages .026 second, and the last .054 second, with pulse-rate at 75. In permanently patulous aortic valves the larger presphygmic interval is practically obliterated, while only the smaller cardio-carotid transmission interval remains as the delay of the carotid pulse on the heart.

The above is the true explanation, and, if allowable to say it, to the writer is due the credit of its first recognition and announcement. Franck at first did not grasp the mechanism of the phenomenon he had proved, but vainly endeavored to account for it by the theory of accelerated transmission of the pulse wave. His later deliverances, however, on this point, are in perfect accord with the true rationale here set forth.[1]

It is easy to explain the fallacy of an exaggerated delay of the pulse on the systole of the ventricle in aortic insufficiency. The enlarged ventricle suddenly filling from both the aorta by reverse, and the auricle by direct flow, communicates a shock so marked as to be mistaken for systole. This impulse occurring in the first part of diastole, and preceding the arterial pulse at such distance, gives the impression of enormous delay of the pulse. In figure 3 the length and steepness of the diastolic ascents show how easily the diastolic impulse would be taken for the systolic beat. The fallacy arose from an error of observation, which the graphic method was needed to correct.

THE DIAGNOSTIC VALUE OF THE PHENOMENON.

Excessive diminution of delay of the arterial pulse, notably the carotid, is a sign of the highest importance in large aortic insufficiency. No other condition, or combination of conditions, except one to be considered, is capable of producing such marked precipitation of the pulse on the heart. The exception consists in the combination, found only in fever, of quick systole and tendency to equilibrium of ventricular and aortic blood-pressures, these conditions also invariably associated with frequent pulsations. The febrile condition, then, with quick cardiac systole, frequent pulse, and low arterial blood-pressure, is capable of reducing the cardio-carotid interval, the same as aortic insufficiency, to the value of the transmission time. These factors, when present, are well declared, and in their absence the graphic sign is pathognomic of the lesion in question. In positive value it outranks diastolic basic murmur; which, as well known, may originate in the aorta without regurgitation, or again with only slight regurgitation, which takes place in the first part of diastole, whilst the altered valves are falling into position of closure. Besides, there is difficulty sometimes in distinguishing between aortic regurgitant and mitral direct murmur of the first part of diastole.

As to default of this sign, in large aortic insufficiency it never fails, except perchance in the presence of an extensible aneurism of the first part of the aorta. The fact that an aneurism with yielding walls produces delay of the distal pulse has been well established in these recent years. Then, in a case of large aortic insufficiency, complicated with a yielding aneurism of the ascending aorta, the precipitating effect of the valvular lesion would be more or less counterbalanced by the retarding effect of the aneurismal pouch, and the carotid pulse would observe, or approach, the normal amount of delay. If aortic aneurism be eliminated, the presence of abnormal precipitation of the carotid pulse is conclusive, in any case, of an open state of the aortic valves.

From this declaration it is plain that the writer does not admit, with François-Franck, default of the sign in the presence of concomitant cardiac valvular lesions. Co-existing aortic stenosis would give the characteristic sloping ascent, but the beginning of the pulse would be in no wise delayed. This has been demonstrated on man and the schema. Mitral regurgitation co-existing, auricle, ventricle and aorta would constitute one cavity, with blood-pressure in equilibrium at the end of diastole, and the blood would be as promptly sent forward into the aorta as in pure aortic insufficiency. Nor could mitral contraction, if present with aortic insufficiency, cause any delay of passage of blood from the ventricle, as the pressure in the latter at the end of diastole would always be equal to the aortic pressure. Hence, whatever the cardiac complication, there is no failure of abnormal precipitation of the beginning of the pulse as a sign of permanent aortic insufficiency.

But the fact must not be lost sight of that this sign, so positive and constant in large aortic insufficiency, will fail to manifest in the form of incomplete lesion, in which the valves permit of regurgitation in the first part, but effectually close in the last part, of diastole. In this state of things, when systole begins, the valvular barrier and excess of aortic blood-pressure being present, time is lost in overcoming the resistance, and abnormal precipitation of the pulse fails to occur. However, default of the sign in incomplete insufficiency is more than compensated in diagnostic import, in that the absence of abnormal pulse precipitation in a case of aortic regurgitation, certainly diagnosticated by the ordinary physical signs, would indicate a partial and not complete insufficiency of the valves; and, aortic aneurism excluded, would be conclusive of this distinction.

In *résume*:

1. Abnormal diminution of the retardation, or, in other words, abnormal precipitation of the arterial pulse, notably the carotid, on the systole of the ventricle in large aortic insufficiency, is a fact positively established, the phenomenon depending purely upon extinction of the normal ventriculo-aortic, or pre-

[1] Compt. Rend. de la Société de Biologie, 27 Janvier, 1883.

sphygmic interval. Hence the phenomenon becomes an important diagnostic sign of this lesion.

2. The presence of the sign is positive evidence of the existence of the lesion, provided only there is no quick febrile movement in the case.

3. Default of the sign does not occur in the presence of concomitant cardiac lesions, but occurs only in the presence of a yielding aortic aneurism. Hence,

4. Absence of the sign is positive evidence of absence of the lesion, provided only there is no aortic aneurism in the case.

5. If the diagnosis of aortic regurgitation is otherwise certain, absence of the sign, aortic aneurism eliminated, is positive evidence of the incomplete nature of the insufficiency.

ACUTE INFLAMMATION OF THE LUNGS IN YOUNG CHILDREN UNDER SIX YEARS OF AGE.

BY A. PATTON, M.D., OF VINCENNES, INDIANA.

[Rèad to the Section on Diseases of Children at the session of the Amèrican Medical Association, June, 1883.

That acute inflammation of the lungs in young children is marked by different phenomena, and runs a very different course from what it does in older children and adults, all medical writers agree, so far as I am informed. The division of the lungs of young children into lobules instead of lobes, and the minute size of the air vesicles, together with their highly membranous and vascular condition, would necessarily lead to important peculiarities in their diseases. From these and other causes children do not have true lobar inflammation of the lungs until, by the progressive incorporation of elementary parts, the lungs attain a state of development that will admit of higher degrees of inflammatory action. It is affirmed by high authority that infants under the age of one year seldom if ever have inflammation of the lungs in any known form. They are, however, liable to have catarrhal fever and acute bronchitis, but nothing that resembles pneumonitis. During the second year, and especially in the dentition period, they are apt to have such a complication as is styled inflammation of the lungs. This, however, is very different, both in pathology and symptomatology, from true pneumonitis, but is equally apt to prove fatal. As the child grows, and its respiratory system develops into a higher state of perfection, it becomes subject to other forms of lung inflammation. Of course, the age at which this state of advancement takes place cannot be determined positively, as it depends partly on the vigor and health of the child. Some authors place the age at six years, others at five, and one thinks true lobar pneumonitis may occur as early as three years. As a general rule, children are not liable to have true pneumonitis until they are five or six years of age. The question then presents, What form of inflammation of the lungs do children have from infancy up to the ages just mentioned?

The older writers claimed that they had lobular pneumonitis, while later writers have named the disease catarrhal pneumonia. But as there are several forms of inflammation of the lungs in young children, it would probably indicate a sounder view of the pathology to name each kind in strict accordance with its nature and cause.

Before the wonderful discoveries in auscultation made by Laennec and others, there was but little distinction made between bronchitis and pneumonitis. They were both styled inflammation of the lungs. This dark era, however, has given place to the reign of the bright sun of science that has cast its effulgent rays into the deepest recesses of the respiratory system, and reveals to the ear of the experienced auscultator every abnormal sound and diseased condition of the lungs. He can say here is the mucous râle of bronchitis, there the crepitating sound of pneumonia. A little higher up is hepatization, and in a spot not larger than a ten cent piece is softening of the hepatized lung.

While this is grandly true in the lung diseases of the adult and children over six years of age, we have to admit that in younger children we are compelled to rely more upon symptoms and less upon physical signs in the investigation of their diseases. It is true that by inspection, application of the hand, mensuration, percussion, and auscultation, we can decide some very important clinical questions as to the seat and nature of the lung diseases in young children. I regard it as far safer and better to study closely the symptomatology of children's diseases, and not rely too implicitly upon physical signs.

If a child has fever, heat of skin, loss of appetite, and a cough that is attended with cries of pain, we may know there is inflammation about the lungs, either in the bronchia, pleura, or lobules.

If we see the case at or near the commencement of the disease, we may conclude we have acute bronchitis to contend with, but which may, and doubtless will, extend to other tissues of the lungs if not arrested. If the disease extends no farther than the large bronchia, we need expect no serious results. But, unfortunately, the tendency is to pass into the minute vesicles, producing vesicular pneumonitis. Then we have a very dangerous disease to contend with. This may be styled one of the forms of inflamtion of the lungs in young children. Another complication that is apt to occur during the progress of acute bronchitis, is acquired atelectasis, or collapse of one or more groups of lobules. This is caused by tenacious lymph plugging up an air tube, which produces complete occlusion, cutting off the air to the adjoining lobules, which necessarily causes their collapse. This is a source of danger in two ways—by lessening the lung capacity, and developing lobular inflammation. We now have another form of lung inflammation, which may extend from lobule to lobule until a fatal termination results.

A still more serious complication is hypostasis, or passive congestion of that part of the lung that is most pendent favoring gravitation of the blood. This condition acts as a foreign body, which in most cases develops another form of inflammation of the lungs. This takes place as a result of weakened action of the heart, and a tendency in the blood to coagulation, favored, of course, by the child maintaining the same position. Another, and perhaps a more frequent

complication, is the extension of the inflammatory action from the bronchia directly to the lobules, constitnting broncho-pneumonitis. This is the catarrhal pneumonitis of a late author, but as it is a consequence of the bronchitis, it would, in my opinion, be more proper to style it broncho-pneumonitis. If acute inflammation of the lungs in young children only occurred as a consequence of bronchitis, it would be most fortunate for the little sufferers. But such is not the case. Rubeola, pertussis, variola, remittent fever, and even difficult dentition, are very apt to become complicated with inflammation of the lungs in young children, and often lead to a fatal termination.

One writer, Grisolle, says that in seven-eighths of all cases of gastritis, five-sixths of all cases of cancrumoris, one-third of all cases of enteritis, measles, and whooping-cough, one-fourth of small-pox, one-seventh of continued fever, one-sixth of all cases of acute inflammation of the brain, one-fourth of diseases of the heart, one-sixth of cancer and organic diseases of the liver, cirrhosis, and Bright's disease, there occurs this most dangerous complication—pneumonitis. It often occurs after amputation, and in extensive wounds, burns, etc.

No doubt, the leading factors in the development of this complication in so many forms of disease are hypostasis and hyperinosis, especially in the adult. In young children obstruction of the air tubes, causing atelectasis, is no doubt a frequent cause of this pneumonic complication, as well as hypostasis. As all the forms of pneumonitis in young children to which I have referred are secondary to bronchitis, or some other form of disease, we may justly style it as an accidental complication, and never idiopathic. It is not by any means an easy thing to determine just when this complication begins or where it is located. True, we may by percussion find dullness, indicating either passive congestion, atelectasis, carnification of the lung, or inflammation of the lobules, which may have assumed an imperfect form of hepatization, but we cannot say certainly which condition it is. Fortunately, however, it is not very important to diagnose these abnormal conditions accurately, as the treatment is the same in all, in young children, varied, of course, by the gravity of the symptoms, stage of the disease, and such other conditions as should influence treatment in the adult. I do not underrate the value of auscultation in this form of lung trouble, as we may be able in some cases to detect the crepitating sound of pneumonitis, but it is an uncertain guide. When I do employ auscultation, I do not pounce down upon the poor trembling child with one of Camman's double stethoscopes like the unicorn upon the frightened gazelle, but quietly apply the ear to the little sufferer's chest, which is a better method than most stethoscopes—I mean for young children. A far better stethoscope than Camman's or any hollow tube is one made of solid hard wood, which transmits sound with more rapidity and far more accuracy than the hollow tube. Sound in air travels at the rate of 1.190 feet per second, while in hard ash wood it travels at the rate of 15,314 feet per second. (Norton's Natural Philosophy.) If we use a tube we get a double sound, the first reaching the ear through the hard wood or rubber, the other by the air in the tube, which is calculated to produce confusion. When the tubes are inserted in both ears we have a still greater source of confusion, as the hearing power in most persons is not equal in both ears.

If we observe the symptoms closely, we will be able to determine, by the increased frequency of the pulse, the frequency and irregularity of the respirations, the moaning of the little sufferer, and the higher temperature and tight cough, that a dangerous lung complication has supervened. We must not conclude that because young children do not have a true form of pneumonitis, there is no danger from the kind of inflammation of the lungs they do have, for it may be safely affirmed that three-fourths of all deaths before the age of six years are caused either directly or indirectly by inflammation of the lungs and acute bronchitis. Then the question of treatment becomes a very important one, indeed.

In devising methods of treatment iu all diseases, we should be guided by sound views of pathology and an accurate knowledge of the action of the remedial agents we employ. Any other practice is empirical, and not in any sense scientific. In the discussion of methods I may differ with some of our highest authorities. But if I give good, sound, scientific reasons for my plans of treatment, they ought, at least, to secure your thoughtful and serious consideration.

Most, if not all, authors advise that the heart's action of these delicate young patients should be moderated by such powerful nervous sedatives as aconite and veratrum viride. This I must regard as a dangerous practice, for the reason that the tendency in all cases of inflammation of the lungs in young children is to debility and depression of the vital powers. The imperfectly decarbonized blood in cases where the lungs are seriously disabled is itself a powerful poison to the great nerve centres, tending to a weakened action of the heart and a lowering of the vital powers, leading towards a fatal result. Any medicines that weaken the action of the heart, as do aconite and veratrum viride, favor capillary engorgements, hypostasis, abscesses, suppuration, and gangrene. And, as the disease so certainly tends in the direction of these alarming complaints, we should do nothing that is calculated to lead to these very results. The old practice of bleeding and tartar emetic was not more dangerous than the one just referred to. Opiates are advised to relieve pain, cough, and restlessness, and alcohol is highly recommended to sustain the vital powers and to stimulate the heart to more vigorous and energetic action. I object to both these agents upon the same ground—they prevent the elimination of carbonaceous matter through the lungs, prevent the excretion of urea and other impurities through the kidneys, thus favoring the course of the disease by holding these poisons in the blood and determining them to the brain and great nerve centres, producing impaired vital powers, and leading directly to the worst forms of cerebral complication, as delirium, convulsions, and coma.

A special objection to alcohol is that it favors coagulation of the blood, leading to embolism and hypostasis—and the still more potent objection, that it increases hyperinosis, which must necessarily develop a higher degree of inflammatory action, involving contiguous tissues in the consuming flame.

If these agents are objectionable because they favor the progress of the disease, a most important question presents itself: What is best calculated to *arrest* the disease? If a building is on fire the first thing is to destroy the combustibility of the burning material. This principle holds good in inflammation. Subdue as speedily as possible its main supporters. It is admitted that in pneumonitis, either in adults or young children, there is hyperinosis before the pneumonitis is developed, and this constitutes the main factor in the disease. Destroy the excess of fibrine, and you have the disease under control. If there was no hyperinosis in inflammation of the lungs in young children, as some contend, we would only have the mildest form of catarrhal fever. I admit that it is far less than in older children and adults, but there is quite enough to produce the most disastrous results and destroy life. The many forms of embolism, the plugging of the air tubes by coagulating lymph, producing atelectasis, the inflammation resulting from hypostasis, and the extension of the inflammation from the bronchia to the lobules, and from lobule to lobule and from tissue to tissue, are unmistakable evidences of hyperinosis, or excess of fibrine in the blood.

It is admitted by all writers on the subject that the exudate is sufficiently fibrinous to produce an imperfect form of hepatization in most cases. This is another proof of hyperinosis. How to efficiently meet this indication is an important question. The observing housewife long ago discovered that if she had a tough bird to deal with, by applying bicarbonate of soda in liberal quantities at night the bird would be nice and tender for breakfast. The alkali had dissolved the fibrine in the bird, which is just what we want to do in the blood of the pneumonic patient. In mild cases I begin with the benzoate of soda, as a cough syrup. If, however, the case is threatening, I use the more powerful agent, ammonium carbonate, in doses of one to three grains, dissolved in water and syrup, and give every two to four hours. This destroys the tenacious quality of the mucus secreted by the bronchia, and causes it to be thrown off in the usual way, and not to adhere to the walls of the air tubes, interfering with the respiratory functions. This form of medication should be kept up throughout the attack, as it will prevent those dangerous complications to which I have frequently referred in this paper by reducing the excess of fibrine. Another remedy, which accomplishes mechanically the same result in removing the tenacious mucus from the bronchia, is an emetic of sulphate of copper or alum. This is a valuable means of relief, and should not be overlooked.

This ammonium carbonate is not only a powerful defibrinizer, but is equally a decarbonizer, which is effected by its chemical action and the elimination of this poisonous agent through the kidneys and lungs. It is also a safe and very efficient stimulant—far safer and better than alcohol in any form. Another valuable procedure is heat and moisture in the form of a flax-seed or corn-meal poultice, applied to the entire thorax, and kept up with great regularity. This is a thousand times better and safer to relieve cough, pain, and restlessness than opiates.

A remedy that has a tendency to expand the capillary vessels and prevent congestion and gangrene is eucalyptus, a medicine that I have found very useful in pneumonic inflammation of young children. If there is any malarial complication we must not fail to give quinine; and if there are signs of weakening of the heart's action we may give with advantage tincture of digitalis, which is our most reliable heart tonic. If a counter-irritant is needed, we may employ a very mild croton oil liniment, or mustard mixed with the poultices may be used instead.

Mild aperients or enemata may be given as required.

The limited time allowed me forces this paper to be only suggestive, and not by any means exhaustive. If, however, it should encourage a spirit of inquiry, and a more thorough investigation of the pathology and treatment of the inflammatory diseases of the lungs of young children, I will be fully compensated for the labor and thought devoted to its preparation.

THE RADICAL CURE OF CERTAIN FORMS OF HERNIA BY A NEW OPERATION.

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[Read to the Section of the American Medical Association on Surgery and Anatomy.]

The study of nature's method of curing an oblique inguinal hernia, shows there are two important processes at work—one, a band of adventitious tissue about the neck of the sac constantly tending to contract and close the abdominal opening at the inner ring; the other, the return to place of the two layers of transversalis fascia, the separation of which originally permitted the viscera to protrude, and the reunion of which forms a valve strong enough to prevent a recurrence of the hernial protrusion. Both processes must operate if the patient is to be cured. The frequency with which these measures are interfered with by local conditions, explains why so few patients with hernia recover spontaneously.

Trusses, by keeping the viscera in place and allowing the structures about the neck to contract, favor the cure of the lesion. The same is true of certain surgical operations. A moment's consideration of the anatomy of oblique inguinal hernia, and a glance at the pathological processes in operation in such cases, will show why so few are permanently cured, despite the perfection of nature's processes for the accomplishment of that end. The neck of the sac can not contract, for it is almost constantly distended by some part of the abdominal viscera. The displaced folds of transversalis fascia cannot return to their proper position, for the same reason. Not only

this; abdominal pressure tends to dilate the hernial orifice, while the protruded viscera force the inner ring downward and towards the middle line. Nevertheless, the surgeon can readily return the hernia, and place the parts in such position that nature can employ her reparative powers to best advantage. Examine an oblique inguinal hernia in the dead body, and it will be found that by proceeding in a certain way the sides of the inner ring—it matters not how largely it may be dilated or how far displaced—can be brought together. To do so, however, traction must be made upon the segment of the circle next the median line, so as to draw it downwards and outwards. This proceeding converts the ring into a slit, the long axis of which is directed downward and inward. One or more stitches properly inserted will hold the parts in this position. The anterior and posterior walls of the inguinal canal can be brought in apposition in the same way. Finally, the pillars of the external ring can be transfixed and united by suture. The closure of the internal ring, and its conversion into a simple slit; the union between the anterior and posterior walls of the inguinal canal thus brought about; and finally, the attachment of the pillars of the external ring, combine to transform the former open passage way of the inguinal canal into a firm, unyielding valve, that renders hernial protrusion an impossibility. Imagine these steps taken on the person of one suffering from oblique inguinal hernia. Would not the parts be placed in the best possible condition for such union as would result in a radical cure of the hernia? Experience abundantly attests that such is the fact. That the reparative processes may be understood in their completeness, it must be borne in mind that peritoneum differs from integument or mucous membrane, in that to procure union it suffices to press serous surfaces together, while to unite either of the others the severed edges must be brought together, and retained in apposition until adhesion occurs. Consequently the peritoneal surfaces at the inner ring, in the canal and between the pillars of the inguinal outlet, when apposed in the manner described above, adhere and blend together within a few hours; in time the marks of the oblique slit at the inner ring disappear by the gradual contraction of the band of adventitious tissue that marked the neck of the hernial sac; the formerly separated folds of transversalis fascia are brought together and firmly blended by the same process, while the union of the serous walls of the inguinal canal, and the attachment of the pillars of the external ring, complete the steps that mark the re-establishment of such a valve as alone can make this weak portion of the abdominal wall sufficiently strong to resist the tendency to protrusion of the abdominal contents.

I will mention in this connection that I now have a patient preparing for an operation for the cure of right inguinal hernia, who formerly had double hernia of that character. In this case the left external ring and inguinal canal are still open, protrusion is prevented by contraction of the neck of the old sac, uniting the folds of transversalis fascia. Here we have one of nature's conservative provisions effecting a cure; occasionally this process is prevented by displacement of the band of adventitious tissue at the neck, instead of the opening between hernial sac and peritoneal cavity closing and the continuity of the transversalis fascia being re-established, thus curing the hernia, the constriction is forced into the canal, and a partial diaphragm is formed between the neck and fundus of the hernial sac. Although cases similar to the one above alluded to, demonstrate that the transversalis fascia is the main element in preventing hernia, yet experience shows that it is desirable in operating for the cure of rupture to obliterate that portion of the sac in the inguinal canal as well as close the internal and external rings. Devise some plan for carrying the inner portion of the transversalis fascia into contact with the outer, at the internal ring, and the other steps in the attempt to convert the open inguinal canal into a resisting valve are easy of execution. The following method has been very successful in my hands:

Place the patient in a recumbent posture, reduce the hernia by invaginating the scrotum, determine the situation of the internal and external rings and the axis of the inguinal canal. Mark these boundaries on the skin with tincture of iodine, and then draw a short line at right angles to the axis of the inguinal canal, from the upper and inner to the lower and outer border of the internal ring. Next force the unarmed end of a Dowell's hernia needle through skin, fascia, aponeurosis of the external oblique, and tissues intervening between the latter and the parietal layer of the peritoneum, into the abdominal cavity, locating the puncture at the lower and outer end of the short line drawn at right angles to the axis of the inguinal canal.

Carry the end of the needle cautiously upward and inward, in the direction of the just-mentioned short line, until its point is about half an inch beyond the border of the inner ring; then force the point straight through all the structures above it and make it penetrate the skin. The end of the needle heretofore in the surgeon's hand is charged with a strong strand of silk, and in the further manipulation of the instrument great care must be exercised that none of the abdominal viscera be needlessly injured. The threaded end of the needle is passed into and out of the abdominal cavity, but the instant its point passes beyond the upper and inner border of the sac, its course is changed, and instead of drawing the threaded end out, the latter is forced downward through the tissues of the inguinal canal by the side of, but without the lower and outer border of the internal ring, and then into the same canal in aponeurosis, external oblique, subcutaneous fascia and integument, the needle made when first introduced. Thus the strand of silk enters and leaves by the same canal so far as the structures between the aponeurosis of the external oblique and the skin are concerned, but below that all is different. In effect, a noose is thrown from the fixed layer of transversalis fascia to the movable one, and the latter with its peritoneal envelope and intervening adventitious tissue of the neck of the sac, is drawn downward and outward, and so fastened in its new position as to obliterate the internal ring without injuring the spermatic cord.

A single suture used in this manner initiates reparative processes that alone suffice to prevent hernial protrusion.

The first suture is introduced, but not tightened; its extremities are left in care of an assistant, and the needle is again threaded for use. Its insertion for the second suture is peculiar, and is in imitation of Dowell's plan; the integument and all loose subcutaneous tissue are elevated between the thumb and fingers of the right hand, if the patient has left inguinal hernia, the point of the thumb just touching the line marking the axis of the inguinal canal. The needle is grasped in the left hand, and its unarmed end is thrust through the duplication of tissues, its point entering about midway on the line marking the axis of the inguinal canal. As soon as the point appears through the fold of skin it is grasped and the armed end drawn into the tissues. This manœuvre carries the end of the needle armed with silk into contact with the aponeurosis of the external oblique; the needle is now so manipulated that this extremity is forced through the aponeurosis into the inguinal canal over the spermatic cord, through the posterior wall of the canal and thence out of the abdominal wall at the point the curvature of the needle causes it to emerge. The unarmed end follows, but is not permitted to come further than the surface of the aponeurosis of the external oblique, the direction of the needle is reversed, its point kept close to the surface, of the aponeurosis and finally brought out at the opening through skin and superficial fascia it made when inserted. This makes a noose that can, in oblique hernia, simply bring the posterior wall of the inguinal canal into contact with the anterior, or in cases of long standing in which the internal opening is displaced, attach the margins of the pillars of the external opening, as well as approximate the surfaces of the canal.

A third suture is carried into place in the same manner, but it is inserted into the pillars of the external ring just above the level of the cord, and its extremities emerge from an opening at the lower end of the line marking the axis of the canal. During these manipulations the index finger of the operator invaginates the scrotum and occupies the inguinal canal, in which position it can guide the needle in its passage through the parts about the internal ring and inguinal canal. The sutures passed, they are carefully tightened, beginning with the one first introduced, and the influence of each estimated by the finger in the canal before being finally fastened. A medium sized key separated from the abdominal wall by four folds of antiseptic gauze, should be used to receive the ligature knots. Some point on the ring of the key will do to support the knot on the first suture, the handle of the key will bear the others. The patient had better be anæsthetized with ether for this operation, as the surgeon can then proceed leisurely with his work. After the ligatures are secured the patient should be removed to his bed, and for the next week maintain the recumbent posture. At the end of seven days the bandages are removed and the ligatures taken out. Should any local tenderness develop, the surgeon should at once control it with rubber bags of ice.

I have operated in 32 cases by Dowell's method; in the 19 cases in which I have used the procedure set forth above, the result, so far as the present condition of the patient is concerned, is all that could be desired.

MEDICAL PROGRESS.

Operations on the Kidneys.—*Nephrectomy.*—Mr. J. Knowsley Thornton gives the record of three successful cases of nephrectomy in the *Lancet.* The first was published June, 1880, but is again given in connection with the others. It was performed on a child of seven, who had suffered with swelling of the abdomen since she was two years old. The diagnosis of renal tumor having been made, an antiseptic aspiration was performed, resulting in the removal of six pints and a half of rather dark and cloudy urine. Two months later the tumor had re-filled and the left kidney was removed through an incision in the median line to the left of the umbilicus. Bichloride of methylene was the anæsthetic used. The ureter was found to be merely a thin fibrous cord. Wound healed by first intention on the sixth day, and the patient was running about the ward on the fourteenth day.

The second case was in a woman of 26, who, after her third pregnancy, eleven days after labor, suffered from inflammation in the right iliac fossa, followed by pain and swelling in the left leg. Six weeks after delivery pain persisted in the right side, which was spasmodic and along the course of the ureter to the right thigh. A fluctuating tumor of considerable size was found in the right loin, and the urine was loaded with pus, ammoniacal and offensive. The kidney was cut down upon through the loin, and Mr. Thornton notes the much greater amount of hæmorrhage as compared with the abdominal section, and the very imperfect knowledge to be obtained as to the condition of the kidney. A sacculated kidney was found, with very offensive pus; two drainage tubes were introduced; the greater part of the wound closed and antiseptic dressings applied. The second day after the operation the bladder urine was free from albumen. The urine soon showed signs of carbolism, and on the fifth he changed to eucalyptus gauze, but in a very short time pus soaked through sixteen layers of the gauze and teemed with bacteria. Ultimately the wound healed fairly well, but the temperature rose, pain increased, the appetite failed, and thirty-five days after the first operation the kidney was removed through the abdominal walls by an incision along the outer border of the right rectus abdominis. After removal the wound was sponged with tincture of iodine, and as there was still some oozing, perchloride of iron was applied, a drainage tube was used, the wound closed, and the end of the ureter brought outside and fastened with a pin. The kidney weighed 1 lb. 2½ oz. The wounds healed completely on the eighteenth day, after which the patient passed from a pint to a pint and a half of healthy urine daily. The constitutional disturbance was decidedly less after the nephrectomy than after the nephrotomy.

The third case was in a woman, æt. 58, suffering from a large, fluctuant tumor in the right side of the abdomen, containing pus, which had been removed four times by aspiration; pus in the urine, and chronic bronchitis was present. The operation was through the abdomen to the outer side of the right rectus abdominis. The kidney was first tapped and twenty pints of pus removed. The kidney was enucleated with difficulty, and the cut ureter attached to the outer edge of the wound. After all the sutures were fastened a sponge was missing; some were then removed, and the sponge found in the bottom of the capsule, causing the operation to last three hours. The kidney weighed 4 lbs, 7 oz., consisting of two large chambers, with a round opening between them. The cause of all the mischief was a small, umbrella-shaped stone, its front being firmly wedged into the mouth of the ureter. There were no complications, the wound healed slowly, and two months later she was strong and well.

Mr. Thornton, at a meeting of the Royal Medical and Chirurgical Society, also reported a case of a woman æt. 37, who suffered from a fluctuant tumor of considerable size, in the right side of the abdomen, with a red, tender and pointing swelling in the right loin, which was freely incised, discharging fluid with an immense quantity of cholesterine, was drained and treated antiseptically, healing in about six weeks. Two months later the wound opened, and again discharged, healing slowly; this accompanied an attack of gout in both feet. Two years later she was operated on by Mr. Thornton for right ovarian tumor, which was removed. While the abdomen was open he examined the kidneys and ureters. The right kidney was large and sacculated, and its ureter was much enlarged, especially at the pelvis rim. The left kidney and ureter appeared quite normal. The recovery after ovariotomy was rapid, but in six weeks the swelling on the right returned and discharged as before. Six weeks later there was a similar discharge from the left iliac region. Fifteen months later the wound in the right side again opened, and discharge went on for fourteen months, without apparently affecting her health at all. Two months had elapsed since its last closure, and she is in excellent health.

Dr, Henry G. Rawdon at the same meeting reported a case of nephrectomy with lateral cystotomy for rupture of the kidney, consequent upon a fall, in a boy æt. 12. The right kidney was removed on the seventeenth day by lumbar incision; on the twenty-first day lateral cystotomy was performed, and a free drain for the urine established. Death took place on the fortieth day from pyelitis and circumscribed suppuration of the left kidney.

Sir T. Spencer Wells reported the removal of an enlarged cancerous kidney, in a man æt. 58, with death on the fifth day. He dwelt on the importance of uniting, in all cases of nephrectomy by abdominal section, not only the divided peritoneal coat of the anterior abdominal wall, but also the divided peritoneal covering of the kidney.

Prof. J. Marshall gave a case of traumatic suppurating hæmatoma, connected with the left kidney, in a girl of 13, which was treated by puncture and drainage for a little over three months with recovery. The fluid withdrawn contained 5.5 per cent. of urea, whereas the urine contained from 2.4 to 3.6 per cent. Although there was no history of hæmaturia, the urinous odor given off on boiling the fluid, and the high percentage of urea it contained, pointed to a possible laceration of the kidney itself.

Mr. Berkeley Hill, in a woman, married, æt. 26, suffering for some years from attacks of pain in the right hypochondrium, with vomiting, found a soft, fluctuating swelling in the right lumbar, and partly in the umbilical and iliac regions. The urine contained pus and albumen. After aspiration had been performed, resulting in the withdrawal of 4½ oz. of pus, the swelling rapidly enlarged, was laid open and found to be a distended kidney, from one of the recesses of which he extracted an irregular calculus, weighing 64 grammes. Urine ceased to discharge from the wound 31 days after the operation. There has been no return of pain, the kidney can be felt as a tender, firm mass and there is still pyuria.

AFFECTION OF THE EYES ASSOCIATED WITH NORMAL MENSTRUATION.—Dr. M. Landesberg of Philadelphia gives two cases in the *Centralb. für prakt. Augenheilkunde.* The first is a case of herpes of the cornea, in a girl of 15, who 7 months before had menstruated for the first time; the flow returned regularly and was normal in duration and degree, with some pain in the back and head as premonitory symptoms. She was seen at six succeeeding menstrual periods, when each time there was a recurrence of the eruptions, after it had disappeared entirely during the intervening period, with one exception which is noted. At the first period at which she was seen, the eruption affected the right eye, with a slight injection of the left; at the second period, both eyes were affected; at the third, both; at the fourth, the right only, but the condition persisted up to the time of the fifth, when it was increased in severity; at the sixth, the right eye alone, and at the seventh, both eyes were free. The family removed and the case was lost sight of.

The second case was in a negro girl of 14, strong, well built and in good general health. Her menses were established 10 months previously, were regular and without trouble. Among the premonitory symptoms were blood pressure in the head, noises in the ears, sparks before the eyes, and an unusual feeling of warmth in the whole body. Twice nose bleeding had taken place with the commencement of the menstrual flow. She was brought before the doctor, to ascertain what was the matter with her right eye, of which at several periods in the last few months she had complained of the loss of sight; this it seems was coincident with the onset of the menses, improved with its close, and in 8 or 10 days perfect vision returned; this had already occurred three or four times. The right eye was strongly injected, with a normal cornea and iris, $S=\frac{10}{100}$ Jaeger 10. Field of vision free. With the ophthalmoscope, aqueous humor red, and at the base of the anterior chamber a thin layer of dark red blood. After dilatation of the pupil, the vitreous humor was clear, there was a slight venous

hyperæmia of the retina, and a marked curving of the vena ophthalmica superior. The left eye was normal. The blood was reabsorbed and normal vision restored in about 10 days.

Two days before the next menstrual period, Oct. 20, the eyes were again examined and found to be normal. The girl complained of blood pressure in the head and of pains in the back. The ears felt warm, the face was heated, the breasts were hard, and the nipples turgid; perspiration was marked. Oct. 21, increased blood pressure in head; ears and face hot; hands warm and moist; ciliary vessels of the right eye strongly hyperæmic.

On the evening of Oct. 22, appearance of the menses coincident with a dark red cloud before the right eye. Twenty-one hours later an examination showed the following: Right eye, marked venous hyperæmia of the conjunctiva of the eye-lids; aqueous humor red. At the base of the anterior chamber a thick layer of bright red blood; at the fundus of the eye venous hyperæmia. S.=$^{10}_{70}$ Jaeger 8. Field of vision free. Left eye, normal. Spontaneous resorption of the blood and return to normality inside of eight days. At the following menstrual period the same condition and course was observed. At the December menstrual period the same condition was repeated. April 5, the girl was three months pregnant, and the right eye had remained normal since the December period.

Spontaneous Development of Gas in the Bladder.—M. F. Guiard has collected a number of these cases which he reports, in detail, in the pages of the *Annal. des Malad. des Organes Genito-Urinaires*, with the conclusions that, where there is no abnormal communication between the urinary passages and the alimentary canal, the phenomenon is very rare. Its clinical symptom is the escape of gas through the penis, and seems to be connected with a special fermentation of the urine, which is only observed in those cases of glycosuria that have been submitted to catheterism. The sugar, under the influence of particles of ferment introduced by the instrument, has resolved itself into alcohol and carbonic acid. This, then, is a symptom of glycosuria, but it seems to have no value in prognosis of itself.

Prolapsus of the Rectum Treated by Injections of Ergotine.—M. Jette has treated with success sixteen cases by the use of ergotine in solution with cherry laurel, 1 gramme to 5 grammes, injecting 15 to 20 and 25 drops every other day. The needle is introduced about 5 millim. from the renal orifice, parallel with the walls of the intestine, and should penetrate to the depth of 2 to 4 centim. into the thickness of the sphincter fibres. The injection should be introduced gradually on account of the pain it produces. The pain is at first very severe and lancinating, then becomes dull and constant, lasting for several hours. The treatment may take a few days or several weeks to effect a cure. With a feeble dose there is a frequent desire to go to stool and to urinate, with strong doses there is a spasm at the neck of the bladder, dysuria, or a retention of urine for eight or ten hours. In a few patients Vidal has noted vertigo, a tendency to syncope, a painful sense of constriction about the heart, with a hard, firm and somewhat slow pulse. The later injections are more active than the first, and seem to indicate a cumulative action, as in digitalis. Vidal uses this means also, as applied to old hæmorrhoidal tumors, which protrude and are accompanied by paralysis of the sphincter. The tumor is forced either from its cutaneous or mucous surface, becomes dusky and tender, but is very favorably modified without forming abscesses.—*Therap. Contemp. Med. et Chir.*

A Case of Urethral Calculus.—Cultivator, æt. 36; admitted to hospital for obstruction in the passage of urine, which had been passed with great difficulty and only in drops for the past five days. History of chronic gonorrhœa of two years duration, but none of stricture. On examination the penis was swollen and œdematous, and a hard, painful tumor, the size of a small orange, was found just in front of the scrotum. A No. 6 silver catheter was passed into the urethra, but its progress was impeded at the seat of the tumor, and its contact with a stone evidenced by the metallic click and a grating sensation. He was placed under chloroform, an incision about 1½ inches long was made over the inferior wall of the urethra, and a stone measuring 2¼ x 1½ x 1 inch, weight 980 grains, was removed. In six weeks time, with the use of carbolized dressing and catheterism, the wound was represented by a minute fistula. The stone was a uric acid calculus.—*Indian Medical Gazette, Calcutta.*

Death Following a Rectal Injection of Sol. Acid Carbol.—A case has recently been concluded in the High Court of Calcutta, to which the *Indian Medical Gazette* devotes considerable space, and where a boy of five had been suffering from bloody diarrhœa and the presence of thread worms. The physician who was called to relieve this condition injected 18 ounces of a 1 in 60 solution, representing 144 grains of carbolic acid and warm water. A few minutes were occupied in administering the injection, during which the child felt no pain; but while the enema was being retained by pressure the child's head dropped on one side, and there was a state of complete collapse, and it remained unconscious for six hours, with total loss of reflex power. Artificial respiration, the battery, injections of oil and of milk, and twice of ammonia, were employed until some reflex action was induced. Four hours later the child became conscious and partook of liquid food, but five and a half hours later still—that is, fifteen hours and a half after the administration of the enema—the child died in convulsions. Three or four attacks occurred, which were not violent or prolonged. There was no post-mortem held, and the physician was found guilty of causing death by a rash and negligent act.

Sponge Grafting.—Dr. de Lautour, in the *Australian Medical Journal*, gives a case of a severe burn in a child of four years, where a thick band of cica-

tricial tissue extended across the back of the knuckles, across the thumb, extending far down and also up above the wrist. The hand was bent backwards, and the fingers back on the hand, and the thumb dislocated backwards. He divided the cicatrix at intervals of one-half to three-quarters of an inch (the cicatrix was generally the thickness of the little finger), and dissected up a little from the bottom of each incision, so as to loosen the cicatrix. The dislocation was then easily reducible, and the hand and fingers easily brought into their natural position. A splint was applied to the palmar surface, retaining the parts normally, and there was a gap in each incision of about one-half an inch. In each of these gaps he fitted a piece of sponge (fine Turkey sponge, washed in a solution of iodine, then of salicylic acid and borax, and then in a solution of salicylate of soda), allowing the sponge to overlap, in order to provide for possible shrinking. The sponge was retained in place by strips of salicylated isinglass silk plaster, and the whole dressed with dry lint, on which was spread an ointment of eucalyptus oil and vaseline, ʒi to ʒi. The grafts adhered, the granulations grew through the sponge; there was some suppuration, the granulations as they grew pushing out the discharge in front of them. They ultimately enclosed the sponge, and a new cicatrix grew over the top, leaving an elongated cicatrix and the thumb in its natural condition. Nine months later the original cicatrix had somewhat contracted, and the grafts show quite distinct from the plain fibrous band. In commenting on his case, Dr. de Lautour expressed it as his intention in his next case of enucleation of the eye-ball, after removing the eye-ball, to insert a piece of sponge within the capsule of Tenon, and stitch the conjunctiva over it, as calculated to make an excellent stump.

OBSTRUCTION OF THE BOWELS; FÆCAL VOMITING: RECOVERY.—Mr. George R. Fraser, L.R.C.P.E., of Wark-on-Tyne, Northumberland, writes:

"On April 11, at 10 P.M., I was hurriedly sent for to visit a lady, aged about 45, who was said to be suffering from 'cramps of the stomach.' She was in bed, vomiting frequently, and complained of intense pain of the stomach and bowels. Her pulse was little affected, her tongue clean, her temperature normal, and her bowels had been freely moved twenty-four hours previously, after the use of aperient medicine. I prescribed bismuth with hydrocyanic acid, and also a full dose of tincture of opium, under the impression of having to deal with a case of acute gastralgia. The treatment had no marked effect, for, upon visiting her five hours after, I found she had passed a restless and sleepless night. The pain was sometimes acute, and the nausea and vomiting recurred frequently. I was shown a hand-basin containing upwards of a pint of distinctly fæcal material which she had just vomited, and her breath had also a strongly fæcal odor. The real nature of the case was now apparent. On careful examination I could ascertain no cause of strangulation; no external hernia, nothing abnormal within reach by the rectum, and no abdominal tumor existed, and fæcal impaction could not be looked upon as probable. Copious injections failed to bring a trace of fæcal matter from the bowels, and only served to show that obstruction was complete. The abdomen was distended, and the pain, as already noticed, often most severe. The early appearance of fœcal vomit was remarkable. In all the circumstances I ascribed the symptoms to a twist, or to an intussusception at some point in the course of the small intestines. If due to intussusception, might not the purgative taken by the patient have had something to do with its production? We know that invagination is apt to arise from causes that produce increased irritability of the bowel. The stercoraceous vomit enabled me to form an early diagnosis, a point of the greatest moment in these cases, as it enables us to adopt a rational course of treatment. Better leave such cases entirely to nature, than administer a single dose of drastic medicine. No time was lost in placing the patient under the influence of opium. The drug was given as tincture, but generally in the form of powder, frequently repeated and continued throughout the attack; and no food of any kind was taken, for which, indeed, the patient expressed no desire. Ice was not procurable, but cold spring-water and soda-water were enjoyed in small quantities, frequently repeated to allay thirst. The effect of the opiate was soon apparent. Vomiting became less frequent, no doubt from the influence of the drug in controlling intestinal peristalsis, and the patient became comparatively easy and had some rest. The characteristic vomit continued to recur at much longer intervals. Occasionally the rejected material was merely a greenish fluid, consisting, no doubt, of the water swallowed mixed with bile. The symptoms were now less acute, but distension increased. Warm fomentations were constantly applied, and injections given occasionally. On the third day she was seen in consultation by Dr. Ridley, of Gateshead, who suggested operative means, or at least tapping, for the purpose of relieving the tympanites, which was now becoming extreme, and that possibly the bowel might right itself. Her friends, however, were averse to any form of surgical interference; and the treatment was continued as hitherto, with the addition of nutritive enemata, and the free use of belladonna liniment to the abdomen, as recommended by Dr. Ridley. The opiate maintained its soothing influence, but the symptoms became more urgent. Hiccough was constant in the evening; tongue red and dry; pulse 134; temperature not taken. She had another good night, and in the morning looked decidedly better than on the previous evening. She had two attacks of fæcal vomiting during the day, but rested well. It was now the fifth morning, and the last upon which sickness and stercoraceous vomit appeared. Her pulse was good, and her expression cheerful. In the afternoon she informed me that 'something had liberated itself in her inside,' and that she was passing wind since I saw her last. A liquid motion followed soon after from the bowels, which contained a few firmer pieces of fæces of the size of hazel-nuts. From this date her improvement was uninterrupted. She soon regained her

usual health, and has since remained perfectly well.

"Invaginations are said to be of frequent occurrence, giving rise to temporary derangement of the bowel, and they are also believed to become soon disentangled by the normal peristaltic movements. If this were a case in point, the favorable result was probably due to the free use of opium. Had purgatives been used fatal strangulation would, I think, have inevitably supervened. A timely diagnosis would render the purely medical treatment of these cases more successful than it has hitherto been."—*British Medical Journal.*

Galium Aparine as a Remedy for Chronic Ulcers.—Dr. F. J. B. Quinlan, M.D., Dubl., F.K.Q.C.P., Physician to St. Vincent's Hospital, Dublin, has treated cases of chronic ulcer with great success, by means of poultices made from "Cleaver's" (*galium aparine*). Respecting a very bad case of senile ulcer, Dr. Quinlan writes: "We had now come nearly to the end of April, and our failure in this case was complete. It appeared to me that now was the time to try the galium aparine, which was beginning to peep out in all the hedgerows about Dublin. An ample supply for this and other less severe cases has since been kept up, and it has been used with the most marked success in the following manner. Grasping in the left hand a bundle of ten or twelve stalks, with a scissors held in the right hand, the bundle is cut into junks about half an inch long. These are thrown into a mortar, and pounded into a paste. This paste, which has an acrid taste and slightly acrid smell, is made up into a large poultice, applied to the ulcer, and secured with a bandage. It is renewed three times a day. Its action appears to be a slight steady stimulant, and powerful promoter of healthy granulation. Its effect in this most unhopeful case was decisive and plain to all. Healthy action ensued, and has since steadily continued; and, after a month of treatment, both ulcers have been reduced to considerably less than half their original size. If this action continue, which I have no reason to doubt, the cure will be accomplished within a measurable and short period. The patient is in the ward, and anyone can see the great amount of new dermatisation which has been effected during the month." Dr. Quinlan was equally successful in several other cases. He continues:

"A difficulty at once suggests itself as to its general employment; viz., that in winter and spring it is not to be had at all. It appears to me that this difficulty can be effectually met by the method of ensilage, by means of which green food for cattle has, for the last few years, been kept perfectly sweet and fresh by burying it in silos under the ground. This plan is generally known, but all particulars about it can be learned in the pamphlet of Mr. Thomas Christy, F.L.S. (Christy and Co., 155 Fenchurch Street, London, E. C.). In the case of the galium, the process would consist of cutting the herb very fine, ramming it down by screw-pressure into a glazed earthenware jar with an air-tight cover, and burying it in the ground. Thus secured from air, moisture, and heat, it would be likely to keep through the winter. One of my pupils, Mr. M. Pierce, has already laid it thus down, and will report the result to me. This plan, if successful, might be extended to other pharmaceutical herbs; for I have always had the idea that green herbs are more powerful than dried ones. Indeed, the late Mr. Donovan, of this city, used to maintain that, to make tincture of digitalis properly, the alcohol should be brought to where the foxglove was growing, and the live plant plunged into it.—*British Medical Journal.*

Puerperal Affections of Mother and Child.—The transmission of puerperal affections from mother to child through the milk seems to be shown in a striking manner in this paper. Dr. Gaulard first discusses a case where a puerperal affection is the result of exposure to erysipelas, and secondly a case where puerperal lymphangitis gives rise to erysipelas. The first case is of a woman confined by the doctor while attending a number of cases of facial erysipelas. Eight days after her confinement she is seized with symptoms indicative of puerperal uterine lymphangitis, which results in an abscess of the broad ligament, which discharges itself through the rectum. The second case was taken a few days after confinement with symptoms of puerperal lymphangitis, but continued to nurse her child, which appeared healthy with the exception of a redness of the eyelids, for which slightly astringent lotions were used to prevent a possible invasion of ophthalmia. The umbilicus did not cicatrize, and very shortly an erysipelatous redness invaded the pubic region, scrotum, thighs, legs, feet, buttocks, and lumbar region, not at any time passing beyond the umbilicus. The child at the same time suffered from fever, insomnia and diarrhœa. The scrotum, which was affected by some effusion into the tunica vaginalis, became darker, and finally sphacelated—the slough separated, leaving a bare wound, which took on a healthy appearance. The child took the breast with avidity, but soon vomited all the milk taken in; the diarrhœa became very frequent, and the stools of a very unhealthy nature, so that it was decided to take the child from the mother and give her to another nurse, when all of these symptoms disappeared rapidly. The mother was allowed to give her breast to the nurse's child, an infant of four or five months, vigorous, healthy. It soon took on this marked redness in different parts of the body, of a fugitive nature, appearing and disappearing suddenly in one or the other region, without the general health being apparently affected. The mother's milk examined carefully presented nothing abnormal, and the child, after entire recovery, was returned to its mother's breast, who nourished it satisfactorily.—Gaulard. *Bulletin Médical du Nord. Mars.* 1883.

Imperforate Urethra.—Male child; aged thirty-six hours; position of meatus well marked; sexual organs well formed. A stylet failed to find the canal; puncture of the bladder at the pubes caused the discharge of about two ounces of urine. It was found necessary to make an exploratory incision on the inferior surface of the penis to search for the canal, which was supposed to be obliterated near the glans penis.—M. Folet, Soc. Cent. de Med. du dipr. du Nord, *Bulletin Médical du Nord.*

THE

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, AUGUST 11, 1883.

LOST MEMBERSHIP.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

What has been the course of the Association in the case of members who have failed to keep dues paid up? Does payment for one year restore them to active membership, or must all arrears be paid? Will subscription to THE JOURNAL secure the privileges of membership at the next meeting to a member now in arrears? Respectfully, ——— ———

The foregoing letter of inquiry was received a day or two since, and as the questions it contains have been asked many times during the past year, we think it may be profitable to give them a public answer. The course of the officers of the Association in relation to members not paying their annual dues, is clearly defined by the following provisions of the constitution and by-laws: "Any permanent member who shall *fail* to *pay* his annual dues for *three successive years*, unless absent from the country, shall be dropped from the roll of permanent members, after having been notified by the Secretary of the forfeiture of his membership." Any member in arrears for a period of not more than *three years*, can retain his membership, by paying to the Treasurer the *whole amount* due. When one has been a member and has allowed his dues to remain unpaid more than three consecutive years, and has received *notice* from the Secretary, that his membership in the Association is *forfeited*, there is no provision in either constitution or by-laws for his reinstatement by paying any amount of previously unpaid dues.

On the contrary, having forfeited his membership and received official notice of the fact from the Secretary, he is in the same position as though he had never been a member. The only way for him to regain membership, is, to obtain from his State or local Society an election as delegate, attend the annual meeting of the Association and register as a new member. Simply subscribing for the journal of the Association does not secure any privileges of membership in the meetings of that organization.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.—The fifty-first annual meeting of this Association was held in accordance with the previously published programme, in Liverpool, from July 31 to August 3, inclusive. The *New York Medical Record* of August 4 contains a very brief abstract of the proceedings, received by cable dispatch. The meeting is represented to have been largely attended, and the work done in the several Sections varied and important. Among the guests in attendance from other countries was Dr. Austin Flint, Sr., President of the American Medical Association, who was received with great cordiality. In a letter from him, dated July 4, he expressed much interest in the current year's work of our own National Association and its culmination at the next annual meeting in Washington. He will soon be home, and, if his efforts are promptly sustained by the officers of Sections and prominent members of the profession throughout the country, the next meeting will show an amount and quality of work which will bear favorable comparison with the work of any of the national medical organizations of Europe.

YELLOW FEVER AND CHOLERA.—No evidence has come to hand that either of these diseases have made advances, or appeared in new places since the previous issue of this journal, and there is a strong probability that the latter will not extend beyond its present boundaries this season. Should the remainder of this month and September be accompanied by unusually high temperature, in the South Atlantic and Gulf States, there will be more danger of the occurrence of yellow fever, in spite of the most vigilant quarantine influences.

DISTANT APPOINTMENT. — We learn that Dr. Charles Fremont Dight, Assistant to the Chair of Pathology and Practice of Medicine in the University of Michigan, has been elected Professor of Anatomy and Physiology in the Medical College at Beirut, Syria, in Asia. He is expected to enter upon

his work the coming autumn. He is now visiting the principal medical centers of Europe. We wish him long life and much usefulness.

NECROLOGICAL REPORT.—Dr. Toner, Chairman of the Standing Committee on Necrology, presented to the recent meeting of the Association a voluminous report. To prevent absorbing too much space with that kind of reading in any one number of THE JOURNAL, we have thought it better to give a few of the Biographical Sketches in each number.

CORRESPONDENCE.

OPIUM POISONING.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

The treatment of opium poisoning by atropine has been too long and successfully practiced to need the support of any new clinical facts, still there are modifications of the treatment which may merit notice, inasmuch as it does not always happen in emergencies of this class, which the physician is called upon to meet, that he finds a salt of atropia accessible. In such cases he is not without resources if his pocket medicine case is ordinarily well equipped.

A few days ago a two-days-old baby was given one-fourth grain of morphine by mistake. I saw it nine hours later, when at first sight, it seemed to be dead, as the friends believed it to be. Deeply cyanotic, it showed no sign of respiration, and the pulse at the wrist was absent, as indeed it remained, except at short intervals, for many hours.

Having no atropine, I immediately injected subcutaneously five minims of tr. belladonna, followed by an equal amount a few minutes later. By my direction an infusion of coffee was prepared, containing two tablespoonfuls to the cup, which was given hypodermically, a syringeful every ten or fifteen minutes. Within half an hour the worst of the cyanosis had disappeared. A pulse came temporarily to the wrist still earlier; respiration came with gasps, although wide apart. The contracted pupil dilated to more than its normal size, remaining so for three hours, when it began to contract again. The belladonna was then used as before, with a drop of digitalis, as the pulse was again absent from the wrist. As before, both pupil and pulse responded, and all symptoms improved, but an hour later the injection was repeated. Coffee was given subcutaneously throughout the day; artificial respiration was kept up when cyanosis returned, as it did many times, and frequent chafing of the extremities.

By midnight it was quite sure that the child would recover, but consciousness did not return until noon the next day, forty hours after the morphine was given.

I have questioned whether in this case the tincture of belladonna did not serve a better purpose than the atropine would have done, adding to its antidotal effect that of a stimulant to the heart, which seemed needed quite as much as anything else. Undoubtedly not a little of the final and unexpected result was to be attributed to the other means employed, but they are to be regarded only as important auxiliaries, the most striking results having been attained before they were employed. J. R. BARNETT.

Neenah, Wis., Aug. 9, 1883.

CINCINNATI LETTER.

[For THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

It has been the intention of your correspondent to have written ere this, and now fully agrees with Perseus, when he wrote:

> "Unhappy he who does his work adjourn,
> And to to-morrow would the search delay,
> His lazy morrow will be like to-day."

From day to day has this pastime been adjourned only to find it much more easy to do so on the morrow. True, there has been little to write about. We are having a remarkably quiet summer and very little sickness. A cynic at my elbow claims that it is on account of so many of the profession being out of town; it remains to be seen whether that theory is any ways good when our new Board of Health is under full headway. Our Democratic council mortgaged itself by selecting a Board, composed of five saloon-keepers and an advertising, so-called, doctor —all solid Democrats,—and they have likewise shed a halo around their august body by selecting an old-time politician, a chronic place-seeker, who at one time was in the lumber business, as the Health Officer. I should say that, for appearance sake, they did offer the position to that valuable statistician, physician, and gentleman, Dr. Thomas Minor, knowing full well that he would decline. Dr. Minor had the office once, a few years since, much to his regret, as his private business suffered considerably, though he won golden laurels in the estimation of the public for the thorough manner in which he performed the duties of the office. His annual reports were models, and are frequently quoted to-day. The present Board is illegal. The Superior Court was authorized by the Legislature to appoint a Board, but through some delicate question in their (the lawyers') code, they declined. We are anxiously awaiting the meeting of the Legislature, when the guillotine will fall and the Board will be gracefully cremated. In the meantime we stand with bated breath and scan the mortality reports. So far there has been no marked increase over this time last year.

New York, it is noted, is to have a crematory furnace. Not to be behind our Eastern brothers, Cincinnati, too, is taking the initiatory steps towards having one. Cremation is growing in favor fast here, partly on the score of economy, but principally on that of health. Like all reforms, it has its strong advocates and strong adversaries, the latter are in the minority, however, and no doubt before many years the ceremony will be thought nothing more of than the ordinary funeral of to-day, with its long array of carriages, flowers, and costly

casket. There was the reverse of that, however, in the funeral of Dr. Jno. A. Warder, who died at his suburban home a few weeks since of paralysis. He was a member of the Society of Friends, and had always believed the practice of that body in its simplicity in all things should be lived up to, and so directed for his own funeral. A coffin the plainest of the plain, a ceremony after the form of his religious society, private in nature, the family only being present; a funeral cortege consisting of a wagon and one carriage, the rest of the family coming to the city by train, and meeting the remains at the cemetery, where the burial was privately held. It caused some comment by some of the members of the Forestry Association, and of course they had to rush to the daily press, as they were foiled in the effort to palm off a lot of set speeches, that would be asked to go for orations. If a few more men of the ability and standing of Dr. Warder would follow his example, and their families show the same good sense as his did, all this "pomp and circumstance" of the last rites of the dead, which in the main is show, would be materially done away with, as it is hoped cremation will assist in.

The new JOURNAL, as the organ of the American Medical Association, is well received here. It starts out well, and hopes are entertained that when the wheels are all well oiled smooth running will be enjoyed. There is certainly one advantage; you cau have it bound in any form and colored binding yon wish, by that means giving some "life" to your library, and not be compelled, as heretofore, to accept the transactions in black, making your shelves look like the inside of a mortuary, that mournful color predominating to such an extent.

We were highly gratified and edified to have the American Surgical Association meet here some few weeks since. Much good work was done, and we felt highly complimented to think we should have such a distinguished body among us. We have had nothing of the kind since 1867, when the American Medical Association met here. There was so much hilarity on that occasion—"Old Crow," "Amontillado," "Vino de Pasto," to say nothing of "Pommery Sec."—(which caused a good many hicks)—flowing like water; that there was no opportunity for any person to read a paper. There were several commenced, but soon a motion was made to adjourn, as the Association had an invitation to visit a famous wine cellar—a steamboat ride—a reception, or something else of a like nature. As that motion was always in order, the reader would have to stop and hear it carried, while there was nothing for him to do, but to look amiable over the disappointment in not having the opportunity to give the members the results of six months work in preparing his paper, and hand it over to the Publication Committee, to appear in somber hued transactions without discussion. Never since that date, have there been enough votes in the Executive Committee to have that Convention come among us again. There was more hospitality than meeting, but that was on account of our being so near Kentucky, and while we are proud of our hospitable name, we would like to show some of the members, who have found since then what we can do, and those who met with us before, how we are able to extend a welcome now. We will guarantee a royal time. The ladies are prettier; the houses finer; the suburbs more beautiful; the attractions in the city and the doctors more numerous—to make no mention of what can be done in a musical line; or what can be shown in the way of hospitals and medical schools. If we were complimented in having the Surgical Society here, you may rest assured, we were chagrined at the silent manner in which they were treated by that "Great American Medical Compiler," published once a week here—*not one word was made mention of their sessions.* Various theories were advanced, but nothing definite was known until "*The Clinical Brief and Sanitary News*," a monthly for July, comes with an editorial explanation. The editor takes the "two leading editorials from the *Lancet and Clinic*, of June 9," one of which is on how "catgut ligatures are falling in the estimation of surgeons," occupying four lines. The other is a "correction," in which three lines of their valuable space is occupied—commenting on the above. The editor of the "*Brief*," says:—"The importance of the above editorials, added to the fact that the editorial space in the *C. L.* and *C.*, is limited, we trust will be accepted by the distinguished surgeons from all parts of the United States, who have been in convention assembled in this city for a number of days, and have just adjourned, as ample apology for the non-appearance of any notice of their proceedings. There is also this apology: Had the Convention held its meetings in the hall over the office of the *Cincinnati Lancet and Clinic*, and not in College Hall, reports might have been prepared, and space for their publication found, but as it was, the Convention was too far away. The next meeting of the surgeons in this city should be held in Brother Culbertson's hall. We desire to benefit Brother Culbertson, and admonish the surgeons."

Some of our experts with the microscope anticipate much pleasure and profit in visiting your friendly city to attend the American Society of Microscopists. One member expects to take some beautifully prepared specimens of the present rage, "the bacilli."

The different medical schools here have out their new announcements—each trying to outdo the others, at least it has that appearance to one on the outside. The Miamis have at last awakened to the fact that it might be to the advantage of their school to have some young life in the Faculty, and consequently have recognized the ability of some of the graduates who have been in practice a few years, by giving them subordinate positions, with big promises—it remains to be seen whether or no they make them good. There is a general impression that the transfusion of "new blood" has been performed so late that it is hardly possible to aid in the desired resuscitation. They met with an irreparable loss when Prof. William H. Mussey, their National man, was taken from them by death, now nearly a year ago. The restrictions of the Association of Colleges were more than they wanted to stand; so they kicked over the traces, dashboard and all, and are now out entirely, eating husks and pray-

ing for richer pasturage. The Ohios have the lead, as they have had for many years. There is lots of push and energy in the executive officers and Faculty, and they spare no expense to matriculate the student, and more than give him his money's worth in the way of clinical advantages. The dean complimented the new college, or rather the new Faculty of the old, Cincinnati College of Medicine and Surgery not long since, by expressing fears that they (the Ohios) would find them (the Cincinnatis) "a thorn in their sides," or words to that effect, as "they now had a new, hard-working, harmonious Faculty, who would make themselves heard from." The last session—which was the 48th since the college was organized—the first under the new Faculty, certainly looks as though they would be a splinter of some magnitude in the pectoral muscles of the other schools. There is one paragraph in their announcement which reads:

"Believing that without purity of character no one should receive a passport to the sick-room, the Faculty will refuse to recommend any candidate for graduation whose moral character is under a cloud, and the Trustees will publicly revoke the diploma of any graduate of this institution who may be convicted of using his profession for criminal purposes."

This certainly speaks well for the new Faculty, and is worthy of commendation. They took charge of an institution that was in the "slough of despair," and by their lives and acts are regenerating it with a rapidity that is phenomenal.

Drs. Dawson and Whittaker, who have both suffered the severe pangs of grief in losing their wives recently, are, with many others of the profession, out of the city. But this must close, or there will be nothing left for my next. PROTOXIDE.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

The Chicago Medical Society held a regular meeting July 16, at which time Dr. H. D. Valin read a paper of much scientific interest, on "Mechanical Equivalent of Animal Heat," and forming part of a manual of biology which he is writing. It gave the normal temperatures of various species of cold and warm-blooded animals, of certain plants which possess a temperature of their own, of hybernating animals, and referred sleep to certain changes of temperature. The relation of heat to growth was considered one of correlation, though not one of causation, as Carpenter had suggested. The slight effect of heat on proto-organisms, and its powerful absorption by mammals, was referred to the elementary composition of each, etc., Dr. Valin's theory being that heat absorption increased as the atomatic weight of the elements exposed to the heat, and that the higher animals contained more of the heavier salts. He also believed that radiant heat became animal motion in the organism, though the larger part of animal motion resulted from oxidation, or combustion of food. The mechanical equivalent of heat, as calculated by Dr. J. R. Mayer, and ascertained by Joule, was stated, but that was no longer the unit in use. The unit now taken as the standard was 425 kilogrammeters, which is equivalent to a kilogram of water heated one degree C., or raised 425 meters high. This, in English figures, was a pound of water raised one degree C. The heat units of various substances in combustion were then stated, and the writer claimed an inverse ratio between these numbers and the atomic weight of the substances. The experiments of Hirn on human power of work were given, by which it was shown that man at work consumes five times as much oxygen as during rest; that it requires the combustion of 9 ounces of carbon in the human body to maintain work and life for 24 hours, and that a unit of heat is produced by man in 15 seconds, while a unit of heat in man required the combustion of 11 grains of coal, in an engine it required 9½, and in the open air the same quantity of heat resulted from the combustion of 2½ grains of charcoal. The views peculiar to Dr. Valin were that the adipose tissue was the coal-bin of the human engine, and should not be allowed to accumulate unduly, but be reduced by active work in order to maintain health; that vitality was proportioned to the height of the temperature in any organism; that the heat of certain fevers often appeared as mechanical work in the form of violent delirium, and then was no longer appreciable as heat; that the endurance of cold was a mechanical work in the body which generated an equivalent of heat; and that active bodily work abstracted heat from the body, and quieted the mind in mania. But as the machinery of an engine becomes heated by friction and the furnace by contact, so human temperature rises a degree during work, and that was a measure of the work done. A rise of temperature in the brain most likely would give an index of the mechanical work of thought, but this was more easily measured by the plethysmograph, which records the increase of the circulation in the brain during thought.

Dr. W. L. Axford read "notes" of a case of bi-lateral dislocation forward of the fourth cervical vertebra, that had fallen under his care. The accident occurred in the month of March, 1883, to a little girl 8 years of age. The extent of the dislocation was ⅔ of an inch, and no fracture occurred, nor was there any injury to the cord. Drs. E. Andrews and J. G. Kiernan had seen the case, and verified the diagnosis. During the past six months the child had made almost a perfect recovery. The treatment consisted in the "let alone" method.

At no time were there marked paralytic symptoms, but the rotary movements of the head were somewhat interfered with, and the head was thrown forward and had assumed a more fixed position.

Dr. C. T. Fenn reported a case of "Acute Hepatic Abscess," with *Mistaken Diagnosis*, *Free Opening*, *Death*, *Autopsy*, occurring in a boy 14 years of age. It is related that two years ago he received a kick of a horse over his right side, his forearm intervened, and the injury caused him no serious trouble at the time, although he fainted, and ever since he had been subject to pains in the side. He had been an ap-

prentice in a blacksmith shop, and on June 19, 1883, quit work, complaining of headache and pain in his right side, and suffering from "cold." On the second day he had a feverish pulse, hot skin, bad odor to his breath, coated tongue, pain in his head, neck and limbs, and especially under the right breast. Gave tr. opii deodor., kali chlaursaures in glycerine, and aqua distil, and at night applied emp. cantharis 4x5 to the right side across and above the short ribs. On the third day the fetor was corrected, the pain in the side gone, but thirst and headache, and the tongue remained the same; tympanitis, with rapid pulse, high temperature, and a tendency to cough, which would cause pain in his side, were present. On the fourth day he uttered a slight cough with every breath. There was decided flatness over (as Dr. F. thought) the lower lobe of the right lung, extending from the nipple downward. Poultices were applied from this time continually. Tympanitis and perceptible bulging of the right side were noticed. Constant rest on his back caused extreme discomfort, with perceptible shortening of the breath. On the fifth, sixth, and seventh days the temperature of the body was high, the pulse over 100 during the day, with an increase at night. No tendency to any movement of the bowels. The urine is somewhat darker than normal, but skin and conjunctiva unaffected. Patient had to sit up to obtain rest from the pain of lying so long on his back. In this position the heart was noticed beating between the second and third ribs. Dullness on the right side extended to one and a half inches above the nipple. The cough is still somewhat troublesome, but by using salicylate of soda it seemingly now is beginning to subside. There is a dark, moist coat upon the tongue; has marked thirst; tympanitis, with no movement of the bowels. Large enemæ being introduced daily, were retained. He loathed beef tea, but found satisfaction in tea, coffee and lemonade. On the eighth, ninth, tenth and eleventh days the treatment consisted of anodynes, nutriment and poultices. On one of those days he evacuated the bowels copiously, the contents being dark, thin and offensive. The tongue cleaned, and remained so. On the twelfth day the patient appeared much improved. The lateral fullness was reduced. He slept and ate with evident benefit. We discontinued the poultices, and he sat for most of the time in his chair by day. On the fourteenth day he grew worse—the dullness which had been lowering in his side increased to its former stand. He perspired freely, and it was quite disagreeable; had chills and exacerbations of fever at night. On the fifteenth day Dr. D. T. Nelson was invited to see him, for the purpose of assisting in surgical interference, should the diagnosis be confirmed, which was "pleurisy, with effusion." Dr. Nelson used the aspirator at a point about a third of the way from the median line, in front, to the spine, and between the eighth and ninth ribs. Pus was directly perceived, and a free opening was made, followed by a copious, sluggish stream of offensive matter. A drainage tube was inserted, and the opening was dressed with cotton, soaked in carbolized glycerine. Before this was done, however, a finger was introduced directly into the wound, and there were discovered smooth, soft walls, apparently held together by strong trabeculæ. From position of the opening it was concluded the lung was broken down at the site of the large abscess. The prognosis was looked upon as almost hopeless, considering the rapid development. The amount of fluid which escaped at the time of the operation and during the night was at least a pint. On the sixteenth day he was greatly relieved. The cavity was washed freely with carbolized water, which was returned almost clean. Slept well the two nights following. Eighteenth day, the external wound was clean and dry; the carbolized water could be injected five or six inches and immediately be returned almost clean. Reasoning on the assumption that this had been an abscess of the right lung, I thought it quite strange that the only constitutional symptoms were those of septicæmia. The internal treatment was tonic, sustaining, fever mixtures, expectorant and anodyne. By the twenty-first day, as the chills had recurred, with bad nights, extreme heat, and the attempts at cleansing the interior were unsatisfactory, and thinking what new resort to undertake, the patient was seized with a rigor on the twenty-second day, from which he did not rally, and died.

Autopsy twelve hours after death. Body had been surrounded by ice; was distended, and purple appearance of face, neck, chest and abdomen as if decomposition was quite advanced. Incision from top of sternum to three inches below umbilicus exposed contents of the chest. The lungs were both found to be healthy, and crowded up to occupy but half their normal space. The heart was beneath the second and third ribs. The liver extended across the body on a line above the level of the nipples. The stomach and intestines were inflated with gas and aided in forcing the liver higher up. The opening to the abscess was directly over the thickest portion of the liver, and about one-third of the organ seemed to be involved; the rest appeared healthy. The peritoneum was not inflamed. The spleen was softened. No other observations were made, and it was not easy to see how the abscess had its origin. Could it be traceable to the injury received two years ago, and then acute symptoms of three weeks' standing arise?

Dr. W. H. Curtis asked the author of the paper if diarrhœa had been present any time preceding his sickness? Answered, No.

Dr. D. R. Brower asked if any jaundice was present during the patient's illness. Answered, No, but immediately after death the surface turned yellow.

Dr. L. H. Montgomery inquired of Dr. Fenn what the difference in the treatment would have been had the diagnosis of the case proved to be an abscess of the liver? Answered, None, and this was one of the reasons why the case was reported to-night, as well as its comparative rareness.

Dr. W. L. Axford asked if the edges of the liver had grown to the walls of the abdomen? Answered negatively.

Dr. H. D. Valin remarked that one year ago he saw a case of hepatic abscess. Twelve years previously the patient (a man), had malaria. There was no diarrhœa, but decided motion of the heart was

noticed. There was no jaundice. The inflammation was of nine to eleven days duration, when 8 ozs. of pus were evacuated by an opening into the abscess. In two weeks the patient recovered.

Dr. Curtis had met four cases of abscess of the liver, which is not of frequent occurrence in the temperate zone. In brief, they are as follows: The first was an Indian boy, who was taken sick and the abscess pointed to the ribs. A free incision was made, and a knotted lump of lumbricoid worms (large as a man's fist), was first discharged. Then offensive pus followed. The wound was cleansed thoroughly for several days and the boy recovered. In this case the lumbricoides was the cause of the abscess.

Second case occurred in a chronic drunkard who had chronic liver trouble. The man sickened, and a diagnosis of an abscess of the liver was made. A free opening in his side by the knife resulted in the abscess discharging itself. Adhesions to the walls of the abdomen were found. Recovered.

Third case occurred in a women 62 years old. She had marked jaundice, and marked symptoms of septicæmia, and in two weeks purpura set in. The abscess ruptured into the lung and she expectorated pus freely. She rallied and partly convalesced, but chills and fever supervened and her life was despaired of. It, however, gave away again into the stomach, and a large quantity of pus was vomited, when she finally recovered. At 16 years of age, an incision was made in her right side, from which a number of gall stones were removed, and the cicatrix still exists.

Fourth case: Railroad president. Had been under his care for ten days, when he proposed aspiration, but his friends concluded to take him to New York for further advice. This was accordingly done, and there operated upon in the same manner, resulting in recovery.

Dr. A. R. Brower presented a heart having the following lesion:

The case was one of endo-carditis, with roughening of the mitral valve, and no murmur was present when the patient (a woman), was alive. The endocardial trouble began with a puerperal fever of a year previous. The valve was perfectly sufficient is the reason why there was no murmur. Had it been insufficient a murmur would have been discovered. An embolism had formed, but with the stethoscope no possible abnormal condition of the heart could be detected. She also had chorea, and great shortness of breath. No murmur could be detected after exercise, or after laboring under excitement. The patient was anæmic and emaciated. Thinks it rare to find on record a case of mitral lesion, as this case is, and with the other conditions, and no murmur to be heard.

REPORT OF PROCEEDINGS OF THE AMERICAN SOCIETY OF MICROSCOPISTS IN CHICAGO, BEGINNING AUGUST 7, 1883.

The first session of the sixth annual meeting of the Society began Tuesday morning, with an address of welcome by Prof. Lester Curtis, President of the Illinois State Microscopical Society, and a response by Prof. McCalla, of Fairfield, Iowa, President of the American Society of Microscopists. The annual report showed the condition of the Society to be encouraging, and called attention to the important papers which had been prepared for the present meeting. The Executive Committee, through Prof. D. S. Kellicott, of Buffalo, N. Y., Secretary of the Society, recommended the election to membership of fifty persons. These persons, together with about fifty more who were chosen at later sessions, materially increase the strength of the Society.

After discussion a motion was passed, which provides that hereafter no one shall be elected a member unless the admission fee of $3 and the annual tax of $2 accompany the application.

The offer of the Chicago *Times* to publish a complete report of the meeting was accepted.

It was decided to amend the by-laws so that hereafter papers accepted by the Society may be published in any reputable journal, provided that credit be given to the Society.

In the afternoon session Dr. F. M. Hamlin, of Auburn, N. Y., read a paper on

THE MICROSCOPICAL EXAMINATION OF SEMINAL STAINS.

The ordinary method of examination, essentially that of Koblauck, which consists in soaking the stained cloth or object in water and examining the sediment deposited from the water, has led to such poor results that Dr. Hamlin has discovered and recommends the following method: A small piece of the suspected cloth about an eighth of an inch square, is placed on a slide moistened with water, and after soaking a short time a cover is applied. In the case of cotton, the ends should be frayed, and with colored woolen stuffs the suspected parts should be scraped off with a knife. Hairs may be cut off and examined in the same way, but care must be used not to lose the crust which contains the sperms. They will be seen in all cases between the meshes of fibres, or clinging to the threads or hairs, and successive examinations of different portions will reveal any if present. The superiority of this method to the common one is well shown by comparing the results obtained by treating a known stain in both ways. The frequent failure of the ordinary method is probably due to the breaking down of the fragile spermatozoa when the embedding crust is dissolved. The specimens may be temporarily preserved by ringing them, and probably by the use of carbolic acid they may be kept for a long time.

In the discussion of the paper, Dr. Henry Gradle, of Chicago, stated that he had frequently stained spermatozoa in the same way as he stained bacteria. When seeking for them in urine he dries a drop on a cover glass and stains with an aniline color. By successively adding drops and drying he increases the chance of finding the germs when few in number. He has found that they readily take up aniline colors.

A well written paper by Prof. Sarah Whiting, of Wellesley College, on

COLLEGE MICROSCOPICAL SOCIETIES,

was next read. The need of such a society in a college, and the means for making it a success, were

clearly given, and then followed a description of the origin and management of the successful Wellesley College Society.

Next followed a paper by Prof. S. H. Gage, of Cornell University, on

CATALOGUING, TABLEING AND STORING MICROSCOPICAL SPECIMENS.

The value of a complete catalogue was emphasized, and the advantages of the card catalogue adopted at Cornell were pointed out. The following formula will indicate what is desirable for convenience and completeness:

Formula for Cataloguing Microscopical Preparations.—	An Actual Catalogue Card Written According to the Formula.—
1. The general name.	1. Nerve fibers.
2. The number and date of the preparation, and the name of the preparator.	2. No. 31 (Drr. 11), March 21, 1880; S. H. G., preparator.
3. The special name of the preparation; the common and scientific name of the object from which it is derived.	3. Isolated, medulated nerve fibers from the sciatic of the cat (felis domestica).
4. The special object of the preparation.	4. This preparation shows well the axis cylinder and the nodes of Ranvier.
5. The method of hardening, dissociating, etc.	5. Dissociated 24 hours in 25 per cent. alcohol.
6. The special method of preparation for the microscope, viz.: cut into sections, spread, etc.	6. Teased or dissociated on the slide with needles.
7. The staining agent and the time required for staining.	7. Stained over night in picrocarmine.
8. The clearing agent and the mounting medium.	8. Cleaned with turpentine and carbolic acid; mounted in chloroform balsam.
9. The objectives to use in studying the preparation.	9. Use three-fourths and higher objectives (x50x).
10. Remarks, including references to good figures and descriptions.	10. See for figures and descriptions Quain's Anatomy, Vol. II., p. 141, and Ranvier, Traite d'Histologie, p. 723.
Formula for Labeling Microscopical Preparations.—	Label Written According to the Formula —
1. The number and date of the preparation (No. 2 of catalogue).	1. No. 96; 1880.
2. The general name (No. 1 of catalogue.)	2. Nerve fibers.
3. The name of the object from which the preparation is derived.	3. Cat.

Tuesday evening, Prof. McCalla delivered the annual address. The theme chosen was

THE VERIFICATION OF MICROSCOPIC OBSERVATION.

The address consisted in a retrospect of the work of the past, and a statement of the means to be employed to verify the truths of the present and future.

Wednesday morning, Prof. T. J. Burrill, of Champaign, Ill., read a paper on

METHODS OF PREPARING AND MOUNTING BACTERIA.

The elements of successful staining were enumerated as follows:

1. The organisms should be decidedly and conspicuously colored. 2. The general mass of imbedding material should be left unstained, or so different in color that the organisms can be distinctly seen. 3. There should be no granular or other precipitations from the staining material, nor should any portion of the latter remain as a coating on the glass. 4. The color should be suitable for the purposes required, and permanent, if the object is to be mounted for the cabinet. 5. The process should be as simple as possible and free from manipulative difficulties.

The aniline dyes are most serviceable in staining bacteria, and of these dyes methyl violet in aqueous solution is most frequently used. There are two objections to this stain. It is apt to be fleeting, especially if exposed to the light, and alcohol will discharge the color, hence mounting in balsam is impossible. The first may be partly removed by making a deeper stain, and then removing the excess of color by washing. The second objection is best met by using a solution of the violet in glycerine. One part of the dye to five parts of glycerine produces a successful and permanent stain.

Suppose one wants to examine the organisms in his own or any other person's mouth. He may proceed as follows: Secure a little mucus from the tongue or teeth, taking care to avoid the remnants of the last bread and butter enjoyed. Place the substance on a clean glass slip, and if necessary, mix by stirring. Make a little spatula of wood a quarter of an inch wide, and cut square at the end, with which smear a well-cleaned cover glass, after the manner of spreading blood, by drawing the spatula with the material once or twice, side by side, over the desired surface, holding the instrument at 30 or 40 degrees from the horizontal. Dry in the air or with moderate heat; then pass the glass through a flame somewhat quickly three or four times, holding the smeared surface up, and from a bottle, through the cork of which passes a glass rod, put on a drop of the glycerine violet; after one minute or less wash with water by means of a stream from a wash-bottle, and mount while wet for examination, the upper surface being wiped dry. If for permanent preservation, see that the cover glass and stained material are thoroughly dry; then mount directly in pure balsam, or, better in some respects and not so good in others, in Farrant's solution of gum and glycerine. All this can be done without putting the object out of hand, and in a very short time, and our specimen remain fit for the cabinet, or for re-examinations, months and probably years afterward. The use of an alcoholic solution of blue or red aniline would, with the same or similar treatment, be a complete failure, the whole surface, glass and all, remaining smeared with the dye in spite of water washing, and the whole color disappearing with the use of alcohol. With other organisms, as, for instance, the micrococcus of pear blight, the aqueous solutions of red or violet aniline are partially successful, while methyline blue entirely fails, but the strong glycerine solutions of the two former give far better results.

The next hour was to have been occupied by Dr. Detmers, of Champaign, Ill., with a paper on the subject of

PATHOGENIC BACTERIA,

but as the paper was not ready he gave a talk on the same subject, which led to a sharp discussion. Dr. Detmers considered the ordinary classification of bacteria, viz.: that of Cohn, as imperfect, and held that the genus micrococcus should disappear. The forms referred to this genus he believed to be one stage in the development of bacilli or other kinds of bacteria. In other words, a micrococcus has the same relation to a bacterium as a catarpillar has to a butterfly.

He also held that a bacterium may be innocent under certain conditions and harmful under others. He has often found bacteria in his own blood when he was perfectly well, while under other conditions,

when the bacteria were in a different stage of development, they would probably do harm.

It was not to be expected that such views, from one holding so important a position in the government service, presented without evidence, would be accepted without discussion. Dr. Henry Gradle, of Chicago, called attention to the labors and conclusions of Zopf. While acknowledging the reliability of Zopf's experiments, Dr. Gradle considered that the generalization made, namely, that one germ can be changed to another, was unwarranted. The more probable conclusion seemed to be that germs are genetically related as man and the dog are related to the bird in the embryo state.

The next paper was by Dr. G. E. Fell, of Buffalo, N. Y., on

THE CLINICAL ADVANTAGES OF OZONE AND ITS EFFECTS ON BACTERIA.

The author described the practice of Dr. Bartlett, of Buffalo, who has for some time treated zymotic diseases with ozone. The success of this mode of treatment suggested to Dr. Fell a series of experiments to determine the effects of ozone in preventing the growth or destroying the life of germs. The experiments evidently involved considerable labor, but it is doubtful whether the results are of great value on account of ignorance of the labors of others, and inattention to important details. The results were varying; in some cases ozone decreased or destroyed bacterial life, while in others no effect was produced.

The committee on the important subject of

NOMENCLATURE AND SIZES OF OCULARS

presented a report in which they recommended the adoption of the following resolutions:

Resolved, That this society recommends that oculars be named by their equivalent focal distances on the basis of one inch focus corresponding to ten diameters of amplification at ten inches distance, and that this nomenclature be employed in the proceedings of this society.

Resolved, That this society recommends the adoption of the diameter 1.25 inch outside measure as a standard size of ocular tubes, with a preference for 1.35 where larger, and .92 where smaller sizes are required, and recommend 0.75 outside measure for ocular cap tubes, and 1.50 inch measure for substage tubes.

This report was discussed and finally the subject recommitted. At a later session it was brought up, but again referred to the committee to be decided next year.

Wednesday afternoon Dr. G. E. Blackham presented the following resolution, which was adopted:

"In view of the fact that the Royal Microscopical Society of London has seen fit to honor this Society by making its President a fellow of the Royal Society, it seems fitting that there should be some formal recognition on our part of the honor thus conferred by the oldest and most distinguished national microscopical society upon the youngest. I therefore move, first, that the American Society of Microscopists recognize and reciprocate the kindly fraternal feeling shown by the RoyalMicroscopical Society in making our presiding officer an ex-officio fellow; second, that, as a further evidence of appreciation and reciprocal feeling, we hereby elect the President of the Royal Microscopical Society and his successors ex-officio members of the American Microscopical Society."

Prof. W. A. Rogers, of Harvard University, then presented a paper entitled

A CRITICAL STUDY OF THE ACTION OF A DIAMOND IN RULING LINES ON GLASS.

The writer first referred to his theory concerning the method which Nobert may have employed in the production of his test plates. The summary of this theory may be given in his own words:

When a diamond is ground to a knife edge, this edge is still made up of separate crystals, though we may not be able to see them, and a perfect line is obtained only when the ruling is done by a single crystal. When a good knife edge has been obtained the preparation for ruling consists in finding a good crystal. Occasionally excellent ruling crystals are obtained by splitting a diamond in the direction of one or more of the twenty-four cleavage planes which are found in a perfectly-formed crystal. A ruling point formed in this way is, however, very easily broken, and soon wears out. Experience has shown that the best results are obtained by choosing a crystal having one glazed surface and splitting off the opposite face. By grinding this split face a knife edge is formed against the natural face of the diamond, which will remain in good condition for a long time. When a ruling crystal has been found which will produce moderately heavy lines of the finest quality, it is at first generally too sharp for ruling lines finer than 20,000 or 30,000 to the inch, even with the lightest possible pressure of the surface of the glass. But gradually the edges of this cutting crystal wear away by use until at last this particular crystal takes the form of a true knife edge which is parallel with the line of motion of the ruling slide. In other words, when a diamond has been so adjusted as to yield lines of the best character, its ruling qualities improve with use. If Nobert had any so-called "secret," I believe this to have been its substance.

A microscopical study of ruled lines shows that there are different ways in which they may be produced. Ordinarily an opaque groove, which stops the light, is cut by the diamond. Sometimes, however, the particles of glass removed by the diamond are piled up in a window besides the real line. These particles may appear in four characteristic forms: (*a*) They appear as chips scattered over the surface of the glass. (*b*) They appear as particles so minute that when laid upon a window, and forming an apparent line, they can not be separated under the microscope. (*c*) They take the form of filaments when the glass is sufficiently tough for them to be maintained unbroken. (*d*) They take a circular form.

The lines best suited to the work of the microscopist are evidently not of this character. To produce permanently good lines three conditions must be fulfilled. 1. The glass must be tough. 2. The crystal must produce lines which will retain their form after the surface of the glass is rubbed. It

should be remembered that a ruled plate must be cleaned by rubbing only in the direction of the the lines, and never across them. 3. The line must not break down upon the lapse of time.

Passing on to the claims of Mr. Tasoldt, of ruling lines one million to the inch, Prof. Rogers made a sharp distinction between visibility and resolution. In regard to the limit of resolution it must be admitted that no advance has been made since the resolution of Nobert's nineteenth band. It may be possible to go a little beyond 113,000 to the inch, but it is safe to say that this is about the limit. The visibility of single ruled lines is a distinct problem, and it is proposed to substitute this as a test in place of the resolution of lines in close combination. Instead of bands of lines of the Nobert pattern, a series of bands is suggested, each having the same interlinear unit, but with the lines of each successive band finer than those of the preceding band. One mickron is a convenient interlinear unit. A heavy line should precede the band in order to facilitate finding it.

The paper was closed by showing the intimate relations between the limits of naked-eye and microscopic visibility. Lines whose width did not exceed one-sixth of a mickron have been seen by the naked eye which could not be discovered by the microscope.

The next paper was by Prof. A. H. Chester, on

DRY MOUNTING.

On account of the great difficulty in successfully mounting dry objects, namely, the deposit on the under side of the cover-glass, Prof. Chester, following out a suggestion of Prof. Rogers, has worked out the following method, which may he given in the words of the writer:

"The object is fastened to the glass slip in the usual way, and a cell built up around it by means of one or more tin rings. When the cell is high enough so that the cover-glass laid on top will not touch the object, a tin ring having a little larger hole is cemented on, thus forming a ledge on which the cover-glass may rest, with room above it for the wire ring, which holds it in so firmly that there is no danger of its being jarred out. The tin cells are made as described at the Elmira meeting last year, by punching rings from thick tinfoil and afterward stringing the rough rings on a mandril that just fits the hole, clamping them fast and turning them down until they are just the right size outside. After considerable experiment I have adopted the following sizes in the various parts of this work, using a five-eighths inch cover-glass: For the cell-rings a No. 29 punch is used, having a diameter of 0.543 of an inch. For the top rings the punch is No. 22, with a diameter of 0.505 of an inch. This cuts a little larger than its inner diameter, and will just admit the five-eighths cover-glass. For the outer rim of both a No. 11 punch may be used, 0.751 of an inch in diameter, and making the rings large enough to allow for turning down. The tinfoil for the upper ring should have a thickness of about 0.032 of an an inch. No. 21 of the Birmingham wire gauge. Made with a gun-wad punch, the rings will have a bevel on the inside, and being set with the smaller hole uppermost the bevel will help to hold the brass ring in place. The wire rings are made from No. 24 spring brass wire, 0.022 of an inch in diameter. These rings are easily made by winding a wire on a spindle about 0.4 of an inch in diameter, forming a spiral spring, every coil of which when cut open makes a ring. The exact size of this spindle is not important, for the size of the spiral can be varied by putting more or less strain on the wire, or by the rate at which the spindle is revolved. The rings should be a trifle larger than the opening in cells, so that small pieces must be cut out to make them fit exactly when sprung into place. They can then be taken out and the cover-glass removed with the greatest ease. The cover-glasses should not be more than one-hundredth of an inch thick, and several thicknesses of tinfoil may conveniently be used for the lower cells. The thinnest I use is 0.005 of an inch. For objects requiring less than that I simply turn a cement ring on the glass, and then put the top cell on that.

After the reading of this paper there was an exposition of the methods of work by many of the members of the society.

Wednesday evening Prof. W. H. Walmsey, of Philadelphia, read a paper on "Photomicrography," and exhibited his apparatus.

Prof. D. S. Kellicott, of Buffalo, followed with a valuable paper on "Parasites in the Gills of a Crayfish."

At the close of the session many of the members accepted an invitation from Prof. Hough, of the Chicago Observatory, to visit and examine the telescope.

In the next number of THE JOURNAL there will be given a report of the remaining sessions of the society.

REPORT OF THE SECRETARY OF THE SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

Section on Obstetrics and Diseases of Women met in Frohsim's Hall. Dr. J. K. Bartlett, of Wisconsin, Chairman. In absence of the Secretary, Dr. G. A. Moses, of St. Louis, Missouri, Dr. J. T. Jelks, of Hot Springs, Arkansas, was appointed Secretary. First paper, by Dr. W. H. Byford, of Chicago, on "Intra-Pelvic Inflammations of a Chronic Form," was read by the Secretary.

All parties making speeches were requested to furnish the Secretary with copies of their remarks.

Next paper was on "Post-Partum Polypoid Tumors," by Dr. H. G. Landis, of Ohio.

The paper was ably discussed by Drs. Wathier, of Kentucky, and H. O. Marcy, of Boston.

Next paper was read by Dr. H. O. Marcy, on "Restoration of the Perineum by a New Method," the doctor exhibiting the pins with which the new operation is performed. The paper was ably discussed by Drs. Brown, of Detroit, Michigan; E. W. Jenks, of Chicago; H. O. Marcy, of Massachusetts; Haws, of Detroit; Wathier, of Kentucky; Sutton, of Pittsburg; Reamy, of Ohio; Potter, of New York; and Watson, of Wisconsin.

The next paper presented to the Section was by Dr. Sutton, of Pennsylvania, on "Enterotomy as a Com-

plication in Ovariotomy or Oöphorectomy." Dr. Murdock, of Pennsylvania, discussed the paper and confirmed the statements of Dr. Sutton.

Dr. Jenks, of Chicago, moved the appointment of a committee on publication of the papers, said committee to be composed of five, of whom the Chairman and Secretary shall constitute two. After which the Section adjourned.

SECOND DAY.

Dr. Bartlett, of Wisconsin, Chairman; and J. T. Jelks, M.D., of Arkansas, Secretary.

Section on Gynæcology and Obstetrics. Session in Frohsim Hall. Second day, June 6.

Dr. E. C. Dudley asked permission to transfer reading of his paper from this P.M. to first thing to-morrow afternoon. Granted.

Dr. R. Beverly Cole, of California, being absent, and his paper on "Subinvolution, Its Causes and Treatment," not being on hand, the next paper was called, "Post-Partum Atrophy of Uterus," by J. Tabor Johnson, of District of Columbia. Dr. Johnson being absent, Dr. John Morris, of Maryland, read a paper on "What Means can be Judiciously Used to Shorten the Term and Lessen the Pains of Labor?" Paper was ably discussed by Dr. McClurg, of Pennsylvania; A. C. Grant, of Texas; Dr. Abbey F. Rooney, of Illinois; Dr. Reamy, of Ohio; Dr. Smart, of Michigan; Dr. Gordon, of Minnesota; Dr. Martin, of Massachusetts; Dr. Montgomery, of Pennsylvania; Landis, of Ohio; Humiston, Lynn, Massachusetts; Robinson, of Pennsylvania; Dr. Reeves, of Ohio; Horlic, of Ohio; Wathier, of Kentucky; and closed by Dr. Morris himself.

Paper by Dr. E. C. Dudley, of Illinois, on "The Immediate Application of Sutures in Puerperal Laceration of Cervix and Perineum," was read by the author to an attentive audience, and was discussed by Dr. Harvey, Dr. Wathier, of Kentucky; Dr. E. W. Jenks, of Chicago; Dr. Morris, of Maryland; Dr. Maughs, of Missouri; Ulrich, of Pennsylvania; Carstens, of Detroit, being closed by Dr. Dudley himself.

The next paper was read by Dr. W. H. Taylor, of Cincinnati, on "Report of a Case of Laparo-Eletrotomy." Dr. Reamy asked that discussion of Dr. Taylor's paper be set fos first thing for to-morrow afternoon, and the request was granted by the chairman.

Section then adjourned.

Committee to examine and report upon papers in addition to President and Secretary: E. W. Jenks, Illinois; H. O. Marcy, Massachusetts; R. S. Sutton, Pennsylvania.

THIRD DAY.

Third day's proceedings of Gynæcological and Obstetrical Section: First thing in order was the discussion of Dr. Taylor's paper on Laparo-Eletrotomy, and was earnestly discussed by Dr. Dunlap, of Ohio; Dr. Dandridge, of Ohio; Dr. Reamy, of Ohio; Dr. Wathier, of Kentucky, Reed, of Ohio; Dr. Bartlett, of Wisconsin, and closed by Dr. W. H. Taylor, the author of paper.

Dr. Battey being absent, and his paper on "Battey's Operation; Death from Ether," not being on hand, the President called the next. Dr. P. Zenner, of Ohio, read a paper on "Value of Gynæcological Treatment in Hysteria and Allied Affections." Discussed by Dr. Reamey, of Ohio; Dr. Gordon, of Maine; Dr. Corlett, of Missouri; Dr. Maughs, of Missouri; Dr. Crawford, of Illinois; Dr. Reed, of Ohio. The President then appointed the following committees, viz.: The committee on selection of subject for the Prize Essay: Drs. L. F. Warner, of Massachusetts; H. D. Didima, of New York, and W. H. Byford, of Illinois.

Committee of Award: J. C. Reeve, of Ohio; T. A. Reamy, of Ohio; G. M. B. Maughs, Missouri.

Dr. G. M. B. Maughs, of Missouri, then read a most remarkable paper on "The Midwifery, and Gynæcology of the Ancients."

Dr. Martin, of Boston, then read a paper on an Appliance Adapted to Synecological and Obstetrical emergencies.

Session closed *sine die*.

REVIEWS.

LESSONS IN QUALITATIVE CHEMICAL ANALYSIS. By F. Beilstein, translated and enlarged by Chas. O. Curtman. St. Louis Stationery and Book Co., Publishers.

This is a small, well printed and well proportioned book of 150 pages. It is a translation from the fifth edition of Dr. Beilstein's work. The author and editor have made it a compact manual, covering rather more ground than the leading title would indicate, for to the lessons in qualitative analysis have been added about thirty pages treating ing of volumetric analysis. The work is intended to be a laboratory guide for students who desire to gain a fair knowledge of the reactions of the common chemicals and of methods of analysis. It commences with a chapter on Chemical Manipulations, in which is described the Bunsen burner and its management, the use of the blowpipe, manipulations of glass tubing and corks, filtration, and other points in regard to which the beginner needs information. Then follow forty-five examples for practice in qualitative analysis. These consist in making tests for certain substances. For instance, in the first the reaction of common salt with heat and various chemicals is described, and also the tests for sodium and chlorine. Following these examples, and before taking up the systematic course in qualitative analysis, a few pages are devoted to the examination systematically of substances containing a single base. The way to make a qualitative analysis is clearly and at the same time compactly described. At this point the use of the spectroscope is explained.

A few examples in the analysis of organic substances, such as alcohol, sugar, quinine and morphine, are also given. Among the examples in volumetric analysis are some for the quantitative determination of glucose and urea. The book is certainly a good one for the purpose, although it would have been a

valuable addition if the analysis of some other organic substances had been added. It makes a beginning at urinalysis, and no more. While it gives methods of qualitatively and quantitatively determining sugar and urea in urine, it says nothing about the detection of albumen and some other important substances. To be sure, it does not purport to cover this ground, still the book would have been, by their addition, more valuable for those students (medical and pharmaceutical) for whom the editor has tried to especially adapt it.

REPORT OF THE HEALTH OFFICER OF THE DISTRICT OF COLUMBIA FOR THE YEAR ENDING JUNE 30, 1882.

This, the annual report of Dr. Smith Townshend, is a very carefully prepared document. The tables, wood-cuts and maps serve as excellent illustrations of the text. Of course most of the material is of local interest, but the illustrations given of defective drainage in a rapidly growing city like Washington, with the money that is now being spent upon costly private residences, must be of the first importance, and it is evident from his report that Dr. Townshend has fully appreciated this. That great bugbear, malaria, it would seem, cannot be readily treated from a statistical standpoint, as "Malarial fever does not appear as a prominent cause of death in the mortality reports. It is the malarial poison that hastens death in phthisis or consumption, retards convalescence in many other diseases, and, complicating, forms into the incurable what would otherwise be a curable disease." The population of the District of Columbia is set down at 188,653, to meet the medical wants of which there are registered as medical practitioners 426 names.

BOOKS AND PAMPHLETS RECEIVED.

Beilstein's Chemical Analysis. Translated from Fifth Edition, with Additions. By C. O. Curtman, M.D. St. Louis Stationery and Book Co., Publishers.

Anatomy, Surgery, and Hygiene of Rectum. By J. Eastman, M.D. (Reprint).

The Prevention of Insanity. By Nathan Allen, M.D. (Reprint.)

Nasal Cough and the Existence of a Sensitive Reflex Area in the Nose. By J. H. Mackenzie, M.D. (Reprint.)

Report of Health Officer of District of Columbia, March and June, 1883.

Archives de Medicine et de Pharmacie Militaires.

Bulletin de l'Academie de Medicine.

Archives de Medecine Navate.

Massage, Its Application, and A New Operating Table. By F. H. Martin, M.D. (Reprint.)

Experimental Researches on the Tension of the Vocal Bands. By F. H. Hooper, M.D. From Physiological Laboratory of Harvard Medical School.

Transactions of the Maine Medical Association for 1882.

Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States, 1882.

Preliminary Report on the Yellow-Fever Epidemic of 1882 in the State of Texas. Marine Hospital Service.

MEDICAL SOCIETY ITEMS.

SANITARY CONVENTION AT MUSKEGON, MICHIGAN, UNDER THE AUSPICES OF THE STATE BOARD OF HEALTH.—Arrangements having been made by a local committee of citizens of Muskegon, acting with a committee of the State Board of Health, you are cordially invited to be present at the sessions of a Sanitary Convention, which will be held in Muskegon, Michigan, on Thursday and Friday, August 23 and 24, 1883.

SESSIONS.—There will be sessions the first day at 2 P. M. and 8 P. M.; on the second day at 9 A. M., 2 P. M., and 8 P. M. At each session of the Convention there will be addresses or papers on subjects of general interest pertaining to public health, each paper to be followed by a discussion of the subject treated.

OFFICERS OF THE CONVENTION.—The officers chosen are as follows: President, Hon. H. H. Holt; Vice-Presidents: F. A. Nims, Muskegon; K. F. Morse, Whitehall; Hon. John Roost, Holland; Dr. John Reynolds, Grand Haven; Hon. Michael Brown, Big Rapids; F. P. Kenyon, Montague; Rt. Rev. Geo. D. Gillespie, Grand Rapids; A. S. Kedzie, Grand Haven; Henry F. Thomas, M.D., Allegan; G. K. Johnson, M.D., Grand Rapids; E. O. Shaw, Newaygo; W. E. Dockry, M.D., Pentwater; Judge F. J. Russell, Hart; Frank Bracelin, Montague; Secretary, C. P. Donelson, M.D., Muskegon.

ADMISSION.—The admission to all sessions of this Convention will be free, and the public are cordially invited.

OBJECTS OF THE CONVENTION.—The objects of the Convention are the presentation of facts, the comparison of views, and the discussion of methods relating to the prevention of sickness.

ADDRESSES AND SUBJECTS TO BE PRESENTED AND DISCUSSED.—An address by the President of the Convention, Hon. H. H. Holt. Among the subjects which it is expected will be presented and discussed are the following:

The Water Supply, with especial reference to Muskegon; Sewerage and Drainage, and its application to Muskegon; Communicable Diseases,—Scarlet Fever, Diphtheria, and Small-Pox; Ventilation of Residences and Public Buildings; Food, and the Sanitary Regulation of Markets; Instruction in the Public Schools on the effects of Alcohol and Narcotics; Adulterations and Nostrums; Shall there be a General Hospital at Muskegon? The Disposal of Refuse Organic Matter.

The papers are expected to be original contributions, which when read are to be considered the property of the Convention, and to be left with the

Secretary. Programs will be issued before the Convention.

COMMITTEE FROM THE STATE BOARD OF HEALTH.—J. H. Kellogg, M.D., Battle Creek; Henry B. Baker, M.D., Lansing.

LOCAL COMMITTEE.—John P. Stoddard, M.D., Chairman; R. S. Thompson, Hon. H. H. Holt, Rev. M. W. Fairfield, Hon. Nelson DeLong, H. H. Getty, Rev, J. W. Miller, Fred. A. Nims, David McLaughlin, C. P. Donelson, M.D., Prof. C. L. Houseman, Dr. L. R. Marvin, Dr. G. Chaddock, Rev. W. T. Whitmarsh, Hon. L. G. Mason.

Reduced fare on railroads may be obtained by applying to the Secretary of the Convention for certificates. For further information address

C. P. DONELSON, M.D., *Secretary*.
Muskegon, Michigan.

THE third annual meeting of the Lehigh Valley Medical Association will be held on the 15th of this month. Among the papers to be read are address by the President, Dr. Traill Green; one on "Strangulated Hernia," by Dr. A. M. Cooper, of Point Pleasant; and one on "The Diagnosis and Treatment of Some Forms of Grass Hysteria," by Dr. C. K. Mills, of Philadelphia.

AT the third annual meeting of the Ophthalmological Society of Great Britain, which was held July 6, Mr. Jonathan Hutchinson was elected President.

MISCELLANEOUS ITEMS.

COLLEGE ITEMS.

Dr. FRANCIS DELAFIELD has been made full Professor of Principles and Practice of Medicine in the College of Physicians and Surgeons, New York.

H. N. HEINMAN, of New York city, has been made Professor of Principles and Practice of Medicine in the Woman's Medical College of the New York Infirmary.

DR. J. H. MCINTIRE, late of Richmond, Ind., has been elected to the chair of Surgical Diseases of Women, and Dr. Edw. Borck to the chair of Surgery, in the College for Medical Practitioners, St. Louis, Mo.

MR. JONATHAN HUTCHINSON, who has resigned his position in the London Hospital School as senior surgeon, has been made Emeritus Professor of Surgery. Dr. Tidy has also resigned his position as lecturer on Chemistry.

AFTER forty years of servicein the chair of chemistry, in Dartmouth Medical College, Prof. O. T. Hubbard, M.D., has resigned, and been made Emeritus professor. Dr. J. Bartlett will give instruction in chemistry during the present course of lectures.

THE University of Colorado has opened a medical department, their course of study to be four years. The Faculty, with a few exceptions, reside in Denver. Unfortunately, a provision in the State charter prevents the medical department from being established in Denver.—*Denver Med. Times.*

THE Grocers' Company, of London, England, in order to aid and stimulate investigation of sanitary science, have offered a purse of £1,000 for the best essay on the following subject: "To discover a method by which the vaccine contagium may be cultivated apart from the animal body, in some medium or media not otherwise zymotic; the method to be such that the contagium may by means of it be multiplied to an indefinite extent in successive generations, and that the product after any number of such generations shall (so far as can, within the time, be tested) prove itself of identical potency with standard vaccine lymph." The prize is open for competition by citizens of any nation. Persons desirous of ascertaining the conditions in accordance with which the essays must be written, should address Clerk of the Grocers' Company, Grocer's Hall, London, E.C.

WE learn from the Indiana *Medical Journal*, that the Medical College of Indiana has ceased to be the medical department of Butler University. Dr. John Chambers has been elected to the chair of Principles and Practice of Medicine made vacant by the death of Dr. R. N. Todd; Dr. J. W. Marsee to the chair of Anatomy and Clinical Surgery, formerly occupied by Dr. Chambers; Dr. G. L. Curtis to the chair of Physiology, vacated by the resignation of Dr. Wm. B. Fletcher; Dr. James Taylor was made Demonstrator of Anatomy, with Dr. Frank Morrison as assistant.

THE following gentlemen have been appointed by the Governor the State Board of Health of Missouri: E. H. Gregory, W. R. Conery, and P. D. Yost, of St. Louis; G. M. Cox, of Springfield; G. T. Bartlett, of Poplar Bluffs; H. F. Hereford, of Kansas City; and S. C. Hearne, of Hannibal.

The Bristol Medico-Chirurgical Journal is the title of journal to be issued July 1st, under the auspices of the Bristol Medico-Chirurgical Society, and to be edited by J. Greig Smith, M.A., F.R.S.E. It will be published half-yearly.

THE government of France has urged in the Chamber of Deputies a credit of 50,000 francs, with which to pay the expenses of a scientific commission to investigate the cholera epidemic in Egypt

IT is announced (Boston *Medical and Surgical Journal*) that Dr. Calvin Ellis has given up the deanship of Harvard Medical College, and that Dr. H. P. Bowditch has been chosen in his place.

Dr. L. H. MCMURTRY has retired from the editorship of the *Louisville Medical News*, and has been succeeded by Dr. H. A. Cottell.

THE *Chicago Medical Register* for 1883–4 has just been issued. It contains the names of 557 regular physicians.

NECROLOGICAL.

ATWOOD, FRANCIS, M.D., died in St. Paul, Minn., Aug. 5, 1882, aged 36 years. Dr. Atwood was born near Boston, Mass., and obtained his elementary education at Exeter Academy, after which he entered Harvard University, and graduated Bachelor of Arts in 1869. Then entering the medical department of the same institution he graduated Doctor of Medicine in 1872. After spending a year as interne in the wards of the eye and ear department of the Boston City Hospital he went to Europe, and in Berlin and Vienna acquired such thorough practical knowledge of his specialty as to enable him to at once take the front rank as an oculist. He settled in St. Paul in November, 1874, and in eight busy years made a brilliant reputation. Like so many workers he took no time for rest, and vainly looked to the future for the recreation and enjoyment he should have secured as he went along. This broke down his constititution, and the first real sickness of his life carried him off. W. D. HAND, M.D.

BELL, CYRUS, M.D., of Feeding Hills, Mass., died in ——— 1882; was born in Chester, June 14, 1813. He was the son of James B., and early left an orphan, but acquiring a fair education, he studied medicine with one of his brothers, for three of them were physicians. When he was sufficiently advanced he attended lectures at Berkshire Medical School, at Pittsfield, where he graduated M.D. in 1839. After practicing for a time with one of his brothers he settled at Feeding Hills, where for over forty years he was actively engaged in an extensive and responsible practice. He married Miss Chamberlain, of Austerlitz, N. Y. Dr. Bell was noted for his devotion to his profession, and for the careful and conscientious manner in which he discharged all his professional obligations. He was a generous man, a kind and skillful physician, and a steadfast friend. Doctor Bell was not only popular in the county, but was held in high esteem by his medical brethren. His standard of professional responsibility and worth was high, and the deserving always received encouragement from him, and the unworthy was as sternly frowned upon. He was a member of the County Medical Society, and of the State Medical Society, and in 1860 attended as a delegate the American Medical Association. He took an active interest in school matters, and was long a member of the committee.

J. M. T.

From data furnished by H. O. Marcy.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, APRIL 1, 1883, TO JUNE 30, 1883.

BAILHACHE, P. H., Surgeon.—To examine officers and cadets of the Revenue Marine Service, April 2, May 28, and June 4, 1883. To proceed to New York, Y. Y., to make arrangements for the care of seamen, April 30, 1883. To proceed to Chattanooga, Memphis, St. Louis, Cairo, Evansville, Louisville, Cincinnati, Gallipolis, Wheeling and Pittsburgh, as inspector, June 23, 1883.

MILLER, T. W., Surgeon.—Detailed as President of Board of Examiners, May 15, 1883. Detailed as member of Board for the physical examination of cadets of the Revenue Marine Service, May 15, 1883.

WYMAN, Walter, Surgeon.—Detailed as member of Boards for the physical examination of officers and cadets of the Revenue Marine Service, May 1, 15 and 28, 1883. Detailed as member of Board of Examiners, May 15, 1883.

MURRAY, R. D., Surgeon.—To proceed to Pensacola, Fla., and take charge of Quarantine Service, May 21, 1883.

GASSAWAY, J. M., Surgeon.—Granted leave of absence for ten days, April 21, 1883. Detailed as recorder of Board of Examiners, May 15, 1883.

SMITH, Henry, Surgeon.—Granted leave of absence for thirty days, on account of sickness, June 14, 1883.

FISHER, J. C., Passed Ass't Surgeon.—Detailed as member of Boards for the physical examination of officers of the Revenue Marine Service, May 1 and June 4, 1883.

COOKE, H. P., Passed Ass't Surgeon.—Granted leave of absence for thirty days, May 15, 1883.

O'CONNOR, F. J., Ass't Surgeon.—Relieved from duty at Detroit, Mich., and assigned to temporary duty at Boston, Mass., May 10, 1883.

GUITERAS, JOHN, Ass't Surgeon.—Granted leave of absence for thirty days without pay, April 3, 1883.

ARMSTRONG, S. T., Ass't Surgeon.—To proceed to Memphis, Tenn., for temporary duty, May 21, 1883.

BENNETT, P. H., Ass't Surgeon.—Granted leave of absence for thirty days, on account of sickness, June 26, 1883.

AMES, R. P. M., Ass't Surgeon.—Granted leave of absence for fourteen days, April 3, 1883.

DEVAN, S. C., Ass't Surgeon.—Detailed as medical officer Revenue Steamer "Corwin," during cruise in Alaskan waters, April 16, 1883.

BEVAN, A. D., Ass't Surgeon.—To proceed to Detroit, Mich., for temporary duty, June 11, 1883.

GLENNAN, A. H. Ass't Surgeon.—To proceed to Norfolk, Va., for temporary duty, June 26, 1883.

APPOINTMENTS.

The following candidates having passed the examination required by the Regulations, were appointed Assistant Surgeons by the Secretary of the Treasury, June 6, 1883.

ARTHUR D. BEVAN, M.D., of Illinois; and ARTHUR H. GLENNAN, M. D., of the District of Columbia.

THE

Journal of the American Medical Association

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. I. SATURDAY, AUGUST 18, 1883. No

ORIGINAL ARTICLES.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON STATE MEDICINE, ETC.

BY FOSTER PRATT, M.D., KALAMAZOO, MICH.

[Delivered before the American Medical Association, Cleveland, June, 1883.]

MR. PRESIDENT AND MEMBERS OF THE ASSOCIATION:

Your by-laws require of the Chairman of each Section a paper on the "advances and discoveries" of the past year, in the branches of science included in his Section. The somewhat undefined boundaries of the Section of "State Medicine," and the purely practical nature of that part of its scientific domain which is defined, make the task of the Chairman, as declared by the by-law, not a little embarrassing. "Discoveries" which influence and advance State medicine are made and claimed by workers nominally identified with other departments. Physiology, pathology and chemistry, as a rule, make the "discoveries," and the right to report them in all their details and bearings belongs to other Sections. Practical sanitation, the principal aim of "State medicine," makes no "discoveries." It is not permitted to indulge even in the luxury of theories. It uses discoveries when they become established facts, and when they prove to be available for hygienic purposes. I have, therefore, no "discoveries" to report; but of "advances" I have something to say.

Before proceeding to a consideration of these recent advances in sanitary work, permit me to say that psychology, insanity, medical jurisprudence and medical expert evidence have each received, during the year, the attention to which they are severally entitled, but there has been no noteworthy "advance" in either. The cure, or seeming cure, of the insane, in some cases, causing their release from asylum isolation and their return to society, to resume or contract marital relations, and to propagate, by heredity, their unfortunate conditions and tendencies, is beginning to attract attention as a possible—indeed, probable—cause of increasing the percentage of insane to population.

Recent pathological inquiries and researches have suggested the question, What—if anything—may be done by systematic effort to prevent insanity? The question springs, naturally, from present tendencies of medical thought, but, as yet, no answer is given. There has been the usual discussion of the various methods of managing the insane, and with the usual result of continuing, substantially, the established plan. Expert medical evidence occupies a fortable and undignified relation to Ameri practice; but there does not seem to be ent, any hope of relief. When our law permit courts to determine who are e call them to testify for *science* and reli the appearance of testifying for a *side* will command, more thoroughly tha spect and the confidence of courts and people.

The Association has named this the "Section o State Medicine." This seems to be both an incomplete and an incorrect designation. State Sanitation would much more correctly define its purpose and its real work. But in view of the dual agencies essential to the performance of its important function and the nature and purpose of the function itself, it would be much more accurate to disignate or define it by the term "Medico-Legal Sanitation." Prevention of disease, and not cure, is its chief purpose; medical knowledge inspires and guides it; law authorizes and sustains it. In the language of Dr. Chaille, of New Orleans, "State medicine is the application, by the State, of medical knowledge, to the common weal." It is in no spirit of hypercriticism that attention is called to this matter. The designation given to this Section and its work creates distrust in some quarters, and requires elaborate explanation in others, not to speak of other difficulties, all, or nearly all of which would be obviated by a name clearly defining its nature. If it were called the "Section of Public Health," many prejudices and difficulties would be avoided, and this, perhaps, would be as good a name as any. But names, titles and designations, whether fortunate or unfortunate, have not prevented the progress of this latest manifestation of medical philanthropy and enlightened statesmanship, and it becomes my grateful office to report to you its "advances" in methods, conditions and prospects.

This Section of State Medicine was established by the Association in 1873. It has now completed its first decennial period; and not exceeding fifteen years have passed since systematic sanitary work, with State aid, was begun in these United States. Meeting from year to year, as we have, to estimate and report progress, our advance has seemed, to our impatience, to be slow; but to-day, as we compare the best State sanitary work of 1883 with its beginning in 1873, we must congratulate ourselves and our country that during these ten years so much has been accomplished.

What has been accomplished? Sanitary organiza-

tions and machinery have been developed, and, to a great degree, perfected. State and local boards of health, with their secretaries, health officers, and other executive agencies, have been educated, in some degree, for their special work. Voluntary sanitary organizations, sanitary conventions, sanitary books, magazines, newspapers, lectures and discussions, indefinitely multiplied by an unprecedented mental activity in this direction, clearly indicate the professional and popular interest in sanitary knowledge and work. Scientific and costly attention is paid, as never before in the history of man, to the hygienic structure, heating, lighting and ventilating of homes, shops, school-houses and other public buildings. Earth, air and water are investigated, and wholesome suspicions ferret out their unwholesome conditions. Marshy, and other deleterious telluric agencies that extensively pollute atmospheric and aqueous conditions are removed or mitigated by ditching, draining, filling and cultivation. Municipalities without number are supplying themselves with water from purer sources by various systems of supply. Their accumulated filth is destroyed, removed or disinfected and the newly accumulating refuse is carried away by systems of sewerage or other effective agencies.

It is scarcely necessary to remark that hygienic measures, of a certain kind, are as old as the history of civilization; but, until lately, they were used only by great cities. The enormous development of these old and of many new sanitary agencies during the last decade, in towns large and small, are the unmistakable exponents of an unprecedented growth of sanitary knowledge, and of a remarkable intellectual activity among the people regarding its use and application.

It is plain that the people are emancipating themselves from their thraldom to the old superstitions that held them paralyzed and helpless in the presence of epidemics and other fatal scourges, general and local, seeing in them only the special manifestations of God's wrathful punishment of sin. They are beginning to learn that the seeds of many diseases, and their propagation and diffusion, are governed by laws, although their existence is a consequence of a violated sanitary law, and that, by observing the sanitary law, they may, in a measure, escape the fatal results. They begin to understand that

"The curse, causeless, does not come,"

and that it is of prime importance to know and avoid or prevent the true cause. They begin to understand that physical laws may be ignorantly broken without moral guilt, though not without punishment. This gradual emancipation of the people from some of these ancient superstitions, and their paralyzing influence, has been one of the first and most important steps towards inculcating the general belief that much of disease is preventable, and that, so far as it is preventable, it becomes their duty as well as interest to engage in the required measures of prevention.

All this change among the people has had just the effect on our legislatures and law-making powers that was desired, and that is to be anticipated under a form of government like ours. Prior to 1873 but two States in the Union had established State Boards of Health—Massachusetts and California. Since 1873 twenty-five other States have inscribed "Sanitary Reform" on their banners, and now twenty-seven in all, of the thirty-eight States in the Union, practically proclaim that "the safety of the people is the supreme law," that "public health is public wealth," and that to promote "the health of the people is the first duty of statesmen." Eleven States yet neglect or refuse to enlist in this glorious warfare against preventable disease and unnecessary death. Politicians may not favor nor comprehend institutions and movements that furnish neither place nor plunder for their partisans and followers; capital, intrenched behind profitable nuisances and money-making food frauds, may resist the assaults of indignant humanity; prejudice may decry innovations, and urge that we stand by the "ancient ways;" superstition may continue to hold up its hands in holy horror that men should presume to doubt or meddle with the "superintending providence of God;" even scientific evolutionists may scorn our work because it assumes to interfere with their law of "the survival of the fittest;" and ignorance, the rank and file of this army of opposition, may deride and resist, as at first it always does, its saviors and benefactors; and all combined may delay for a while the "consummation devoutly to be wished;" but not long. Success in this grand sanitary movement is certain to come, and not many years will pass before every State of our Union will be engaged in organized effort to battle with the unnecessary ills and evils that torture humanity and enfeeble the State. And when the health boards of thirty-eight States demand a National Board of Health, composed of men who command their confidence, with money and power, to do a quarantine work at the sea-board and on inter-State lines of commerce, that individual States cannot do—then, I ask, when thus challenged, what will the Congress of the United States do? When we ask for bread will it give us a stone?

Resuming our review of the sanitary movements of the decade, the question comes—What primal central impulse has been sufficient, in ten years, to so move upon the popular and the law-making mind of our country as to enlist twenty-seven States in this humane and wholesome movement? After nineteen years of previous agitation by her medical men, Massachusetts, on the Atlantic, in 1869, gave statutory shape to the idea of medico-legal sanitation. California, on the Pacific, followed close after her in 1870. The idea was more fully developed and more fully endorsed in this Body in 1873, by the establishment of this Section, and from here, the leaven of statutory sanitation has been carried by our medical brethren into every city, village and hamlet in the land; and now, three-fourths of our States have created for themselves State and local Boards of Health, all of which, in their respective spheres, move with harmony and more or less of efficiency, to accomplish in concert a humane and a blessed purpose. Missouri, the latest recruit, has been added this year to our ranks; Ohio and Pennsylvania have recently made strenuous

but unavailing efforts to join the majority. We wish you better success next time, brethren; success is sure to come; we expect you, and others with you, to join us very soon. We shall not wait for you in the work, though a warm welcome waits you when you come.

The aid and agency of the American Public Health Association, in producing these flattering results, must be recognized. Its membership, comprising doctors (without regard to denominations), lawyers, architects, builders, engineers, plumbers, and others actively engaged, either officially or by personal interest, in the planning, testing or execution of sanitary methods, has been a most efficient factor among the agencies by which people and legislatures have been brought to understand, appreciate and promote sanitary work.

But first and foremost among all the agencies that have molded public opinion to favor organized hygienic work, stand the individual doctors. Each in his own sphere a power. Together, it has been their work to inspire patrons and neighbors with a willingness to co-operate; but they have led the way, have shown how, and have demonstrated success. And what has been their weapon—what their ways and means? *Facts*. Facts and reason have been their principal weapons. Facts piled on facts have demonstrated that small-pox can be prevented. By its danger to life and features, its loathsomeness, its communicability and its prevalence, small-pox, in the popular mind, stands at the very head of dangerous and dreaded diseases; it stands also—thanks to Jenner's grand discovery—at the very head of the preventable diseases. Isolation of other communicable diseases has been proved, over and again, to be an efficient measure to prevent their diffusion. Many facts in the history of local epidemics have been used to prove the diffusibility and the diffusion of disease by direct and indirect communication; and little does the layman care about our theories of germ-propagation, when he becomes convinced that the disease is "catching."

But facts are used and are useful on a grander scale. Dr. Wm. Farr, the great vital statistician of England, died only a few weeks since. In 1838 he began his long unappreciated and thankless labor in the compilation of vital statistics. During thirty long years he, by persistent labor, accumulated fact on fact, piled table on table and added demonstration to demonstration. His life tables, at last, became the basis and guide of life insurance, and the passage, in 1872 and '73, of the British Public Health Acts, crowned his persevering labors with a grand success. The *British Medical Journal* of April 21 of this year says: "It was Dr. Wm. Farr who created our system of vital statistics, through which the public was taught the necessity for sanitary reforms, especially in our large towns. It was, moreover, the public faith in Dr. Farr as a vital statistician, that gave weight to the mortality statistics issued by the Registrar-General, thus making possible the passing of the Public Health Acts of 1872 and 1875, from which dates the marked decline in the English death-rate recorded during the past seven years." Again it says: "It is not too much to say that the figures collected by him, the principles which he deduced from them, and the accomplished skill with which he impressed the doctrine of sanitary law upon statesmen and on the public mind, have done more to forward the progress of sanitation throughout the world than the labors of any other man, perhaps, who could be named."

Yes, Mr. President and gentlemen, Dr. Farr's tables, Dr. Farr's deductions and demonstrations were the basis on which, we, in the United States, laid the foundations of our sanitary structure. It was mainly from his arsenal of facts and established principles that we drew the weapons of argument with which we won our first victories for sanitary organization and reform. Our own workers, inspired by his example and guided by his experience, were soon busy in the same field of vital statistics, confirming Dr. Farr's results, or demonstrating wherein and why our differing conditions gave different results.

And so we have won our way; the vital facts having been clearly established, on both sides the Atlantic, we have successfully enlisted people and lawmakers in the cause of public health. And now, the fact that during the last decade, we have succeeded, in our efforts for sanitary reform, far beyond our expectations at the beginning, should assure us that the average mind is, after all, fairly responsive to the Baconian system of inductive philosophy. The *facts* being established, the practical deductions therefrom are readily drawn. Our public and private Davy Croketts in effect say to us, "Be sure you are right and then go ahead." But we must first win them to our cause wholly or mainly by facts, or we (even our best men) will be thrust aside as visionary theorists or perhaps as "salary grabbers." (See congressional debates.)

But we shall be asked to state, more definitely, what is or may be done by State Boards of Health, and their auxiliary agencies which justifies their organization and their cost. Partly, if you please, from a natural State pride, but mainly because I know more of its operations than of any other, I will answer this question by briefly recapitulating the annual sanitary work of my own State of Michigan.

The Michigan State Board of Health consists of seven persons nominated by the Governor and confirmed by the Senate. At last report one was a lawyer, one a clergyman and five were physicians, representing two or more schools of practice. Sixteen classifications of nearly forty questions and topics permanently important to our sanitary work, are assigned to sixteen standing committees made up from the members of the Board. Auxiliary to this central Board are nearly 1,400 *local Boards*—there being one created by law, in every city, village and township in the State. To these *local* Boards, is committed every function they can fulfill, each in its own locality, and to the State Board only such work as local Boards cannot do. Permanent correspondents of the State Board are appointed in nearly every important locality in the State. At least, two Sanitary Conventions continuing two full days, are held each year under the general direction of the State

Board in some one of the larger towns of the State, and always on invitation of its citizens, and they are so located from time to time, as to reach various localities and awaken interest in the work, wherever held, among the people of the locality—all being invited to attend. The work of these Conventions consists in the reading of papers by men and women previously selected or volunteering, upon some important general or local sanitary question, couched, in the main, in language all can understand, and, in extemporaneous discussions of the questions raised. A list of the subjects thus presented at one such Convention, recently held, will not be without interest: "What the law can do for the health of the people" by Justice Cooley of our Supreme Bench; "Hygiene of the eye" by an oculist; "Ventilation of basements"—including "Filth and Disease Germs" by a doctor; "The care of health a Christian duty" by a clergyman; "How to combat small-pox" by a health officer; "Ambulance Hospital for small-pox in small towns" by a medical member of the State Board; "Purification of water by freezing" by a doctor; "School life and hygiene" by a doctor; "Hygiene and the clerical profession" by a clergyman; "Analysis of samples of milk and of water" by a chemist; "How to utilize the Press for Sanitary purposes" by an editor. This incomplete catalogue sufficiently states the questions, all of which were simple but ably treated. Nearly all were published in the local papers and widely circulated, by copying or otherwise, all over the State. The State Board itself holds regular meetings, at which its standing committees present useful and instructing reports on assigned questions.

Forty correspondents, in various sections of the State, report statedly the daily meteorological conditions of their respective localities. Reports paid for and required of physicians, of each case of disease dangerous to public health, are made to local boards as a basis of local action. Weekly or monthly reports from local health officers, during dangerous epidemics, to the Secretary of the State Board, and annual reports from the fourteen hundred local boards of health of the number of cases and deaths from communicable diseases. Births, deaths, and marriages are reported by assessing officers and local clerks to the Secretary of State. This work is far from being perfectly done, but year by year the quality of the work is growing better. But all these reports, convention proceedings, and papers are published in an annual volume, and widely distributed. With this annual volume and the quality of its contents all active sanitarians, at home and abroad, are familiar. Having a full knowledge of the work of our accomplished vital statistician and Health Secretary, Dr. H. B. Baker, I wish to say that it is not excelled in America. All officially connected with sanitary work will fully endorse this encomium. And good as is his work as the executive officer of the Board, valuable as are all his published tables of vital statistics and annual reports, I wish to reveal, what may be to many a secret,—good, I say, as is his published work, he is doing, as a vital statistician, better work and broader work than appears. In due time it will speak for itself.

Now, the cost of all this and more to our State treasury has been less, during the past year, than $6,000—this being the gross sum annually appropriated for these purposes. Do you think it pays? I am sure of your answer. But this is a work that educates, not doctors but the people, and the significant, the potential answer must come from the people, largely from intelligent laymen who know the value of life and health to the individual, to the family, and to the State. Let the intelligent men of Ohio and Pennsylvania, and other States not yet enlisted in this latest and best work of the nineteenth century—the men who, directly or indirectly, rule the counsels of their States—let them answer. Let such men consider whether the wide diffusion of sanitary knowledge, such as I have described in my own State, the supervision and suppression of endemic and epidemic diseases, and the curtailment thereby of sickness, suffering, and death, is worth $6,000 a year. And now let me say further; this seeming vaunting of the health work of my own State has been indulged in for a special purpose and in accordance with special requests from various States having no boards, to describe here, and to have it go abroad with the sanction of this great body of medical men, what is done in some States, and what may be done and ought to be done in every State, and how cheaply it can be done. With these facts, and many others not possible to give here, to guide the opinion, it must be left to every intelligent citizen to decide for himself or herself whether all this is worth the money. I said "himself or herself"—it is a fact that the first successful movement made in Massachusetts, and in the United States, in the direction of State sanitation, was instigated by a lady, whose husband was a political leader in the legislature of that State. Women who live at home with their little children, amid unsanitary surroundings, have a great stake in this sanitary movement—aye, and they have great influence to originate and guide it as well, if they will but intelligently use it.

But the cynical and persistently incredulous will ask, perhaps, "How many lives, per annum, do you save?" To this, as yet, we can only answer, "We do not know," and "we never will be able to answer such a question." Our own vital statistics have not yet been carried far enough, nor have they been made thorough enough, to furnish a reliable standard of comparison between distant periods, or to become full answers to such questions. But this we do know—that whereas, by Dr. Farr's tables, the average duration of human life in England thirty years ago was for males 39.9 years, it is now, after only seven years of organized and efficient sanitary work, 41.9 years—an addition of two full years to the average duration of male life in all England. The effect on the average of female life is still more striking. Women, as a rule, suffer more than males from the unsanitary surroundings of their homes, and the improved hygiene of cities and towns of England, for the past seven years is now shown to have added to the average duration of female life nearly three years and a half. This is an addition, by a few years of intelligent work, of five per cent. to male

life, and more than eight per cent. to female life; or an average addition of six and one-half per cent. to the aggregate life rate of England. It is but two or three months since these gratifying results were announced, and life insurance interests are already speculating on the effect they will have on the rates of insurance and of annuities. Is not this sufficient proof that State sanitation, intelligently organized and discreetly managed, is a good investment? This pecuniary consideration, it is true, is on the lowest plane, but the considerations that lie in the higher planes need no arguments.

I shall carefully refrain from basing rose-colored estimates of results on the meager outline of sanitary work done and now described. It is true I have taken (for various reasons given) my own State as a type of what may be done by any State in this direction. I have given from English what cannot yet be given from home statistics—the results to average life-time of seven years' intelligent attention to public health. The conditions, social and economical, that surround these questions, in the Old World and the New, are quite different, and we may expect differences in final results when reached; but who here can doubt that the result in England will be eventually duplicated in America? But our public health work is very imperfect. It is yet in its infancy. Much remains to be done to perfect the work, even of the foremost State. Nevertheless, many States are doing good work, and in different ways and directions. The work cannot be alike in all States, because each has its peculiarities of soil, climate, occupations and populations. While Illinois, West Virginia and New Jersey are doing good work by regulating the practice of medicine and the sale of adulterated foods and drugs, other boards, in the yellow fever region, are noted for some other specialty of work, and all are doing good; but none of them as much good as they may and will do when fully sustained by their respective legislatures. Let us hope the time will soon come when it will be the first care of States to cure their unsanitary conditions, and the first care of newly-organized Territories, organized on virgin soil, to prevent evils for which older States seek costly cures.

But thus the work goes on, rapidly here and feebly there, yet rapidly in the main; as it seems to have progressed during the decade, we feel that it is slow. But in our impatience we must not forget that the medical profession is, of necessity, in advance of the people on these subjects. We must wait for them to understand the significance and practical importance of measures, before we hurry them up to their adoption. Meanwhile, doctors, are we ourselves responsible for any of these tardy movements? You who come from States that have not yet organized Boards of Health, are you or any of you responsible, in whole or in part, for their non-action or for their refusal to act? You who come from States whose Boards have but a feeble existence, are you responsible in any degree, by opposition or by indifference, for the crippled existence they lead?

I am not about to preach a sermon or read a lecture, but I shall take the liberty to ask a few questions. Have we not crippled sanitary work, by claiming for it results that are not yet warranted? Have we not urged as facts in sanitary science, what in truth was nothing more than theory, and sometimes crude theory, too? In dealing with the people of our several States and their law-givers on these subjects, is it wise for us to create expectations of sanitary organization and labor that may not be realized? Will we not be wise if we preach a gospel of facts—assured, established, incontrovertible facts—sanitary facts that are proved by experience and the uniform evidence of vital statistics? Our advanced ideas and theories about germs, contagiums, ferments, *et id omne genus*, about which we ourselves are in more or less of confusion and controversy—what are all these but stumbling blocks in the way of intelligent laymen and legislators? When we can prove to our neighbors that a certain stream, polluted at or near its source, causes sickness and death to many families, they will believe your established fact; but how much will they care about your theory concerning the precise nature and function of the morbid agency that is caused by the stream, especially if it leads you to a somewhat too persistent attitude on the question of practical moment—how to purify it? In this country all systems, or so-called sects in medicine, like all systems or sects in religion, are equal before the law. Have any of us ever been somewhat too arrogant or exclusive in the organization, or the proposed organization and management, of this public affair? In private relations and in private practice we hold, as we ought, to the observance of a code that ignores as unscientific all medical systems based on exclusive dogmas; but in public, where we meet all sorts of doctors, and their patrons as well as our own, as tax-payers and citizens, to discuss and devise measures of common interest, is not one man's medical theory as good as another's? Does not the experience of States that have most successfully inaugurated sanitary work, serve to demonstrate that the only platform on which hygienic effort can be successfully united is the platform of sanitary fact, and that the best men for the work are not necessarily those who think as we do, either in politics, medicine, or religion, but those who can and will do the most and the best work?

Have we not often failed to secure desired legislation by asking for too much at the beginning? Have we not given our cold shoulder to sanitary beginnings because we thought them too simple and inefficient? Cautious business men, when inaugurating new enterprises, favor small beginnings as a rule, and afterwards embark more in the scheme if it does well; have we not been too strenuous for beginning with a large capital of complex and perfect machinery, too complicated and expensive to be understood and appreciated by those who have the power to create? Do Minervas often spring, full grown and full panoplied, from the brains of our political or our medical Joves? Do not infancy and growth characterize the beginnings of human beings and human institutions alike? While we bear in mind (possibly with some conceit, ill concealed), that knowledge is power, are we not too apt to forget that ignorance also is power? Assuming that our sanitary

ideals are truer and higher than other men's—what force will best propagae them, conversion or compulsion? Finally, what better or more hopeful foundation for sanitaryorganization and its ultimate success, can be laid in any State, than the diffusion among its people, by all available methods, of pertinent, and reliable, and comprehensible sanitary knowledge? Has not this, in some cases, been too much neglected, and is not the cause of failure in some States to be found in this neglect of an important preliminary? If the people are once fully informed of their true interests in this matter, doctors theories and doctors differences, if thrust in at all, will not long delay their action—discarding us and our notions they will go straight to some practical result, simple, perhaps, but practical, and it will be our own fault if they dispense with our leadership. It is true medical men have made practical sanitation what it is; they have labored for it under ridicule and reproach; they have made its operations profitable and popular in many localities; but they must advance with the people and not too rapidly; the general, on horseback, advancing to battle, too far in advance of his troops, may be admired for his zeal but not for his discretion.

To subserve one of the purposes of this paper, something has been said concerning the methods by which sanitary organizations have been secured, and something also concerning the details of their first work, and but little of their main operations and permanent aims. That purpose may be further promoted by adding that while the main and ultimate purpose of the army is to fight, organization, drill and discipline are necessary preliminaries to its ultimate business; and our sanitary forces, when properly organized and drilled for their fight with sickness and death will naturally inquire, "at what points are we to attack?" The sanitary layman asks this question now. He is entitled to an answer.

By general and local sanitary surveys of the State, county or district to ascertain the conditions of land, streams and water-fronts, and when found faulty, to take the needed steps, or ask for the needed authority to remove the fault. This, of course, includes land drainage and the pollution of streams by sewage or by other agencies.

In cities and large towns, to carefully inspect, from time to time, the conditions of underlying soil; to regulate the building and sanitary safety of homes and other structures; to keep constant guard over the conditions of water supply; to supervise the removal of all filth, refuse and sewage; to keep constant guard over all food sold, including meat, bread, vegetables, milk, or any other article whose impurity or adulteration may engender disease; the burial or other disposal of the dead; the regulation of lodging-houses and crowded tenements, and the abatement of unsanitary nuisances.

The accumulation of vital statistics showing birth rate and death rate to population; the diseases prevalent and the rate of death according to age, sex and population, and the spread of disease.

These enumerated purposes are clearly within the scope of wise sanitary regulation, and are quite enough to occupy the minds and time of sanitary officials. Time and experience will add other functions, and there is plenty of field and occasion everywhere for sanitary work.

My duty would be imperfectly done in this review if I failed to call attention to the remarkable unanimity with which State medical societies, State Boards of Health, the American Public Health Association, this American Medical Association and the medical profession generally have expressed their approval of the organization and the action of the National Board of Health. The only valid objection ever urged to its functions, or rather to its possible action, is that based on the constitutional question. But it is apparent that there is a quarantine work to be done on the sea-board, and a quasi-quarantine work on the inter-State lines of commerce, whether by river or rail, which the individual States cannot always do. If the functions and work of the Board be confined to the work that States clearly cannot or will not do, the constitutional difficulty will not be serious. But whether serious or not, they are not lessened by devolving them on a bureau instead of a board. On this question the people will soon decide in whose hands they prefer to entrust their health, lives and commercial interests, and until they have decided the question is not settled. Meanwhile, it is gratifying to know that medical sentiment is nearly unanimous for a National Board.

Perhaps it is expected that something will be said of the effect of some recent discoveries on sanitary theory and policy.

The very recent investigations by Pasteur, Koch, Chaveau, Spina, Cheyne, and many others, into the nature of the bacillus and other germ forms, are promising remarkable results. Koch's seeming discovery of the tubercle bacillus, and the evidence produced that it is the specific germ by which tubercular phthisis is produced and may be transmitted, seems likely to begin an epoch of great moment in the study and treatment of this and of many other diseases. But before medico-legal sanitation can avail itself of these discoveries for the prevention or the mitigation of disease, very much must yet be learned respecting the laws that govern the life, the propagation and the transmission of disease germs. We must know, as to these bacilli germs, the laws of acquired or inherited receptivity which control their introduction and development in individuals and families; the atmospheric, telluric and other external conditions which modify their power and action in the larger aggregations of society; the methods by which they pass from person to person (we know, for instance, that the tubercle bacillus may be inoculated, inhaled or imbibed); the duration of the incubative period; and the chemical, catalytic or other action by which their effect is produced. Our knowledge on these points must be substantially exact, or be so demonstrated and demonstrable as to pass into the domain of established and popularly accepted fact, before sanitary architects can build on it as on a solid foundation. One rule which long experience has thoroughly justified in other and similar diseases, is strongly confirmed by our new knowledge, and that

is the requirement of the perfect isolation of the infected from the uninfected. Additional importance is also given to a rigid inspection of milk and meat.

We seem, indeed, to be on the eve of great discoveries in the etiology and pathology of disease, which, without doubt, must greatly increase our practical knowledge and improve our treatment of many important maladies. As medical practitioners, if we cannot individually help to hasten the anticipated result, we can help to swell the multitude who anxiously wait for it; but as medico-legal sanitarians, impatiently waiting for newly and firmly established truth, on which to build improved hygienic and sanitary methods, we, metaphorically, hold our breath.

REPORT OF A CASE OF GASTRO-ELYTROTOMY, IN IN THE SECTION ON OBSTETRICS AND DISEASES OF WOMEN OF THE AMERICAN MEDICAL ASSOCIATION.

BY WILLIAM H. TAYLOR, M.D., CINCINNATI, OHIO.

On the 17th of May, 1883, I was requested by J. C. Mackenzie, M.D., to see a case of protracted labor with him. From the doctor, who kindly furnished the notes for my report, I obtained the following history:

Mrs. M., American, 32 years old, primapara, apparently healthy, 4 ft. 7 inches high, good family history, with exception of considerable pain in abdomen for past six weeks has been healthy during her pregnancy.

On the 13th inst., began to have premonitory labor pains, which have continued to increase to present, except as temporarily relieved by the use of chloral and morphia. The membranes ruptured about 9 P.M., 14th inst., the os then admitting one finger. The head was felt presenting. These general phenomena continued until when first seen by me on the 17th. The conditions were: No appetite; had a care-worn expression; very prominent abdomen, which was not tender on pressure; pulse 120, temperature 101½°; pains severe, and violently expulsive; the os uteri about the size of a silver dollar; the head presenting, but so covered by a large caput succedaneum that I could not determine the position; but little change was produced in the position of the head by uterine action.

It was determined to apply forceps. Ether was administered, and after considerable difficulty because of the close contraction of the os around the head and the diminished diameters at the inferior strait, Elliot's forceps were adjusted. Traction was made at intervals for about an hour with no good effect, the head remaining movable above the brim. Laying aside the forceps, I endeavored to introduce my hand, with view to version, but was unable to pass the whole hand because of the contraction of the outlet. I was, however, able to reach the promontory with the index finger, leading to an estimate of the antero-posterior diameter of the superior strait as less than three inches.

Dr. G. Brühl was now called, as we believed craniotomy alone would suffice to accomplish the delivery. Dr. B. desired to make further effort with forceps, and after much effort introduced the Busch blades, but with no avail. I now perforated the head and adjusted the Braun-Simpson cranioclast repeatedly, with no better result after powerful effort than each time to bring away the fragment of bone caught in the instrument.

Dr. Brühl desired to attempt version, but although a leg was caught no effort availed to change the position of the child.

Some six hours had now elapsed since I first saw the woman, her pulse was becoming weak and more frequent, and the os and vagina were so œdematous that we could no longer touch the head; we therefore summoned N. P. Dandridge, M.D., with a view to abdominal section. Upon his arrival the question of operation was discussed. Cæsarean section was considered because of the rapidity with which it could be executed, but after deliberation it was determined to attempt "Thomas" operation as the less severe, and, therefore, less likely to prove fatal from shock in the enfeebled condition of the woman. Porro's operation was not suggested.

The patient was much exhausted with a very rapid, feeble, pulse, and elevated temperature; the fundus uteri was well to the right and the child's head could be felt in the left iliac fossa. Owing to this obliquity, the left side was selected for the incision instead of the right as usual, for it was thought the os uteri would be more accessible from the left. The preparations for the operation were soon made. The room was lighted by a single lamp, so to secure sufficient light, several candles were tied together and two torches thus made, the limited number of assistants made it necessary to entrust the lights to two women friends, who held the candles with their heads averted for fear of seeing the blood during the operation, and more than once we were embarrassed from the lights being improperly held. The woman was etherized and then placed on a kitchen table. Dr. Dandridge, as Surgeon, standing on the left of the woman and I just to his right, Dr. Brühl using sponges on the right of the woman and Dr. Mackenzie caring for the anæsthesia. The incision was commenced above and just outside of the spine of the pubis, and was extended parallel with and about three fourths of an inch above Poupart's ligament to a point somewhat beyond the anterior superior spine of the ilium, the subcutaneous fat which was quite thick, was divided and the aponeurosis of the external oblique and the underlying layers of muscular fibers carefully incised on a director, the full length of the external wound. The transversalis fascia was then carefully divided on a grooved director, the deep epigastric artery was cut and at once secured with hæmostatic forceps and then ligated, so that the amount of hæmorrhage during this part of the operation was small. Dr. Dandridge carefully stripped the peritonæum from the iliac fossa with his finger, when I placed both hands in the wound, gently pressing back the peritonæum and retaining the subjacent bowel.

Dr. Dandridge passed his left index finger into the vagina and forced the vaginal wall into contact with the right hand in the external wound. It was thus

possible to determine the thickness of the vaginal wall and make sure that the bladder was not intervening. A small opening was then made in the vaginal wall with scissors cutting on to the finger in the vagina; this opening was enlarged by a slightly curved blunt-pointed knife. While the knife was still in position I passed my finger along its back into the vagina and hooked it securely into the os; the vaginal wound was then enlarged, principally by tearing, Dr. Dandridge's hand passed through the wound, readily seized the leg, which had been caught in the effort at version, and drew it into the wound, expecting to complete the delivery easily; but owing to the firm contraction of the uterus around the child, this effort failed. Dr. Brühl sought the other leg, but was also unsuccessful in effecting version, but with the Braun-Simpson cranioclast the head was secured and extracted, the placenta followed at once; the uterus contracting well, the wound was washed out with a carbolic solution; a large drainage tube was passed through the wound into the vagina and projecting from the vulva, and the edges of the external wound closed by sutures. During the operation and at its termination a half ounce of whisky was injected into the rectum, the woman was placed in bed with hot bottles about her, morphia sulph. gr. ¼ and atropia sulph. gr. $^1/_{60}$ were given hypodermically, with directions to give morphia sulph. gr. ⅙ and half an ounce of whisky every two hours. A bandage was placed around the body. The child probably weighed six pounds. The operation was complete about 9 P.M.

The shock of the operation, considering the state of the patient, was certainly less than was to be expected, and not to be compared to that which would have followed Cæsarean section. I believe if the latter had been undertaken the woman would have died on the table. Five hours after, her pulse was better than before the operation, and twelve hours after the operation the temperature had fallen and the pulse was stronger and a little less frequent; but this slight promise of recovery was not verified, and she died forty-four hours after delivery, having in the meantime received the most approved treatment for such cases, viz.: stimulants, anodynes, the use of the "ice cap," "Kibbee cot," etc.; her urine was freely secreted and drawn several times by catheter; her bowels were moved by enemata.

Autopsy.—Sixteen hours after death the weather was warm, and there were some evidences of decomposition about the body; slight cadaveric rigidity; nutrition apparently good; abdomen greatly distended and tympanitic; a wound in the abdominal wall 4¾ inches long, situated upon the left side above and parallel to Poupart's ligament, extending from the anterior superior spine of the ilium to the spine of the pubis; the edges of the wound were united by sutures, and when these were removed it was discovered that no union had taken place, but that the wound was occupied by a small quantity of dark coagulated blood. When the peritoneal cavity was opened a small amount of gas escaped, probably from decomposition, as no other source for it was found; and some emphysema of the tissues existed. The greater part of the abdominal distension was due to gas contained in the stomach and large intestine. There were not the slightest indications of inflammation of the peritonæum; no adhesion existed, and no inflammatory products could be detected, although carefully looked for. The bladder was intact; there was a tranverse incision in the left side of the vagina about an inch below its attachment to the cervix, and extending from this upward to the uterus, but not involving it, was a longitudinal tear. The cervix uteri was extensively lacerated, and there was also a laceration in the posterior wall of the vagina, about on a level with the margin of the pouch of Douglass, but not involving the peritonæum. There were two transverse tears in the posterior wall of the uterus, one an inch in length, an inch and a half above the os uteri; the second two inches in length, an inch and a half above the first; these did not extend deep into the muscular tissue.

The diameters of the straits of the pelvis were carefully measured, after all the soft parts were removed, the periosteum only remaining.

SUPERIOR STRAIT.

Antero-posterior diameter,	3⅜	inches.
Transverse "	3⅞	"
Right oblique "	3⅞	"
Left "	3¾	"

INFERIOR STRAIT.

Extremity of sacrum to pubis,	3⅝	inches.
Transverse	2⅞	"

At the brim of the pelvis corresponding to the symphysis pubis there was a projection backward of the bone, to the extent of ⅜ of an inch, diminishing the conjugate diameter to that extent.

The other organs were not examined.

Remarks.—The subject of gastro-elytrotomy has been so thoroughly considered by H. G. Garrigues, M.D.[1], in his exhaustive monograph, that no historical or theoretical review at my hands would be justified, but the operation has been so seldom performed that every practical point which can in any wise add to our knowledge and just appreciation of its value is entitled to careful study. The case which I have had the honor to lay before you, while unhappily it can not be credited with success, still it offers favorable answer to some theoretical objections. The earlier operators (except Baudelocque) believed that the operation was not feasible on the left side, because of the presence of the rectum, and Garrigues urges the attempt when opportunity should offer. Such opportunity presented in Hime's case and again in ours, because of the right obliquity of the uterus. The incision was accordingly made on the left side, affording ample space for the removal of the child, and as unfortunately we had occasion to see without injury to either bladder or rectum. Upon this point Dr. Dandridge, says: "The danger of making the incision on the left side, namely—wounding the rectum, is, I believe, entirely theoretical, on the contrary, from the experience of this single case I believe that the left side possesses decided advantages

[1] *N. Y. Med. Journal*, xxiij., *Am. J. Obstet*, Jan. 1883.

over the right. The operator is enabled to insert his left hand into the vagina, and thus have the right free to use the knife or scissors in opening the vagina —a critical point ; the use of the finger in this manner, is, I am sure, much safer than a plug of wood as has been suggested, and renders the use of an instrument in the bladder superfluous, as you can easily determine whether or not the bladder is intervening by the thickness of the tissues between the fingers. Again the sense of touch may enable you to feel and avoid an artery in the wall of the vagina, as was done by Skene."

Objection has been made to the operation because of injury to the peritonæum in raising it from the iliac fossa. In the case narrated, no difficulty whatever was experienced in lifting the peritonæum. The statement of Hime[1] upon this point may be cited as our own: "The peritonæum being much more ample than in non-pregnant women, and hanging in folds at the bottom of the wound." Prof. Kinkead,[2] in addition to objecting to operating on the left side, expresses the opinion that the peril from hæmorrhage would be greater in gastro-elytrotomy than in Cæsarean section. Theoretically, I cannot agree with such apprehension, and our practical study positively controverts it. We expected some hæmorrhage, and were prepared for it. The deep epigastric artery was cut, but its divided ends were seized with hæmostatic forceps, and but slight bleeding occurred.

The introduction of the finger into the vagina, instead of a wooden plug, as at first proposed, is, as suggested by Skene, of great advantage in aiding the selection of the proper place for cutting its wall. The clipping of the wall at the point made prominent by the finger is a very easy and safe method of opening the vagina. After the opening was made, the fingers were chiefly used for its enlargement to a degree sufficient for the passage of the child. This part of the operation, which is considered the most dangerous because of the liability of hæmorrhage, was almost without bleeding, so that I believe I am entirely truthful in saying that not more than two ounces of blood were lost during the whole operation, in this respect fully verifying the recently expressed opinion of Prof. W. M. Polk, that the operation "involved little or no danger to the ureter, blood-vessels or tissues."[3]

Having had opportunity some years since to perform the operation on the body of a woman far advanced in pregnancy, I was impressed with the great difficulty of delivering the child through the incision, but I now believe that such difficulty largely results from post-mortem rigidity, which is usually present when such operations are made on the cadaver. In our case, no difficulty was experienced in verting the uterus by pressure on the fundus, the finger alone sufficed to bring the expanded os uteri to the opening in the groin. I was surprised at the facility with which the dilated os, the vaginal wound, and the external incision were brought into close relation and direct line, so that a straight instrument, *e. g.*, the bone forceps, could be passed into the uterine cavity. To explain this abnormal facility, I recall to you a well-known result of such protracted labors, which I believe has not been referred to in this connection. Lusk, speaking of labor where the contraction of the pelvis is such as to keep the head at the brim, says: "The uterus retracts up over the head of the child ; if the head does not descend, the vagina is drawn upward."[1] Now, in this process, peculiar to the cases which are especially adapted to this operation, we have developed the conditions of vagina materially facilitating delivery through the wall, also, by this extension, the danger of injury to the ureter is greatly diminished.

Prof. Kinkead,[2] in commenting on the cases reported up to 1880, says: "It is worthy of note that in none of the recorded cases did the patient suffer from the distressing vomiting so common after the Cæsarean section," and our case adds one more of this favorable condition after operation, and also another (the fifth) in which the bladder was not injured.

The honored projector of this operation, Prof. T. G. Thomas, when he made his first report upon it, said, "All that I am striving to prove is that it *probably* has fewer and less grave dangers attendant upon it than the Cæsarean section has,"[3] and allow me to add my humble testimony to that of others, that experience *does* prove it.

Appendix.

Cases of Gastro-Elytrotomy Previously Performed.—*Case 1.* (*American Journal of Obstetrics*, May, 1870.) Prof. T. G. Thomas. Woman, multipara, sick ten days with pneumonia. Child turned, born alive. Mother and child died in an hour.

Case 2. American Journal of Obstetrics. April, 1878. Prof. A. J. C. Skene. Primipara. Contracted pelvis. Version attempted, craniotomy performed ; abandoned because of œdema of parts and narrowness of pelvis, forty-eight hours after commencement of labor. Prof. Skene operated ; death in seven hours;

Case 3. American Journal of Obstetrics, February, 1876. Prof. A. J. C. Skene. Multipara rachitic ; child previously by craniotomy, another at seventh month, another by induced labor in ninth month, with version ; child lived for several months.

October 29, 1875, at full time ; early in labor membrane unruptured. Gastro-elytrotomy. Mother and child saved.

Case 4. Am. J. Obstet., October, 1877. Prof. A. J. C. Skene. Primipara, æt. 37 ; great deformities. Operation four days after labor began ; artificial dilatation of os uteri ; great difficulty in operation because of deformity of woman. Mother and child saved.

Case 5. Am. J. Obstet., April, 1878. Prof. T. G. Thomas. Primipara, æt. 20 ; "very small and undeveloped ; labor far advanced ;" operation December 3, 1877. Mother and child saved.

Case 6. London Lancet, 1878, vol. II, 656. Thos. Whiteside Hime, Sheffield, Eng. Ninth pregnancy ; æt, 37 ; cancer of recto-vaginal septum obstructing vagina ; had been confined to bed eleven

[1] *London Lancet*, II, 656, 1878.
[2] *Dublin Med. Jour.*, May, 1880.
[3] *N. Y. Med. Journ.*, May 19, 1883.

[1] Am. Gyn. Trans., iv, 368.
[2] L. c.
[3] *Am. Jour. Obstet.*, May, 1870.

weeks, and for 48 hours had been vomiting incessantly; has had diarrhœa several days.

Operation July 14, 1878. Incision made on left side. Child saved; mother died in two hours.

Case 7. Brit. Med. Jour., November 30, 1878. A. W. Edis, London, Eng. Primipara; medium stature; pelvis small, undeveloped, conjugate not exceeding 2½ inches. Forceps tried twice; sudden development of large thrombus in right labium.

Gastro-elytrotomy about 18 hours after labor commenced; live child delivered. Mother died from collapse 40 hours after operation.

Case 8. Am. Jour. Obst., January, 1880. W. R. Gillette, M.D. Primipara, æt. 23; rachitic; 4 ft. 4 in, high, antero-posterior diameter 1½ inches; child dead before operation.

Gastro-elytrotomy eighteen hours after rupture of membranes. Much difficulty in dilating os uteri, which was finally incised with scissors. Great difficulty in delivery of child; forceps, version and craniotomy failed; cephalotripsy and cranioclast succeeded. Mother recovered.

Case 9. Am. Jour. Obstet., October, 1879. J. T. Everett, M.D., Sterling, Ill. Removal of calcified fibroid of uterus. Woman recovered.

DISCUSSION.

N. P. Dandridge remarked, in regard to Dr. Taylor's paper, as follows:

I have but little to add to the details that Dr. Taylor has already given of the case he has reported. I desire, however, to emphasize what he has said of the facility with which the operation was accomplished. The conditions by which we were surrounded were certainly not such as were favorable for the performance of an unusual and difficult operation. The absence of sufficient light was at times especially embarrassing. This was particularly felt during the first steps of the operation when the abdominal muscles were being incised and there was danger of wounding the peritoneum.

This membrane once recognized and pushed back, the subsequent procedures were guided more by the sense of touch than by sight. The number of assistants present was too limited, and this was also an embarrassment. These facts are especially dwelt upon to show that the operation may confidently be undertaken without special preparation of any kind, and with such means as are ordinarily at command for the performance of any surgical procedure.

In most of the cases of laparo-elytrotomy which have thus far been reported, the conditions requiring the operation have been recognized either before or early in labor, and thus the operator has had time for full consideration of all the necessary steps of the operation, and to prepare himself for the complications which are likely to arise. In the case reported it was only after prolonged efforts had been made that the impossibility of delivering through the natural passages was determined, so that the woman was in such a condition of exhaustion that it was absolutely necessary to at once determine the course we should pursue. For my part, I was summoned without any knowledge of the previous or existing conditions, and was influenced in urging the performance of laparo-elytrotomy rather than Cæsarean section, which at first sight seemed certainly easier of execution, by the exhaustion of the woman, which was such that it seemed scarcely possible that she could survive so severe a shock.

I was, I confess, both surprised and delighted with the facility and rapidity with which the operation was concluded—an operation I had always regarded as necessarily intricate and requiring considerable time. The hæmorrhage we encountered was trifling; the epigastric artery was readily secured, and there was really no appreciable bleeding from the wound in the vaginal wall. The experience of this case, contrary to what has been said heretofore, leads me to think that the left side possesses decided advantages over the right, for when the first steps have been completed and the peritoneum stripped back, the left hand inserted into the vagina enables you to appreciate between your fingers the thickness of the intervening tissue, and thus determine whether you are free of the bladder or not, and it is certainly much safer to cut directly upon the sensitive finger rather than a plug of wood, as has been suggested. In all these manipulations the operator has his right hand free for the use of instruments, which to most is an advantage if not a necessity.

I was a student in the College of Physicians and Surgeons when Dr. Thomas reported his first case before the class, and I well remember the impression the recital made upon me at the time. Once I have had an opportunity of assisting at the operation upon the cadaver—the case referred to by Dr. Taylor, and in our recent experience was much impressed with the greater facility with which it could be executed upon the living.

THE SURGICAL TREATMENT OF INTESTINAL OBSTRUCTIONS.

BY H. O. MARCY, M. D., BOSTON, MASS.

[Presented to the Section on Surgery and Anatomy, Cleveland, June, 1883.]

It may be accepted as an undisputed fact that our operative art has won its greatest triumphs during the last decade in the field of abdominal surgery. The peritonæal cavity is no longer the "terra incognita" of the surgeon, and its invasion is not attended with the fears or dangers of even a very recent period.

The removal of ovarian tumors is not invested with serious dangers. Hysterectomy is considered a justifiable operation in quite a variety of diseases. Kidneys are extirpated, with a fair showing of success. Biliary calculi are not exempt from surgical interference.

Gun-shot wounds of the abdomen and intestines are no longer treated with opium, and death awaited as almost certain, but the injured portions are, so far as possible, restored in their continuity or resected; and the removal of malignant growths involving the digestive organs is even advocated by some, whose opinions are worthy of the greatest respect.

Crowned with such laurels, is it surprising that the surgeon demands a revision of the entire question of

operative interference in intestinal obstructions? Little can be added by any student of the subject to the masterly and classical literature already contributed upon the causes, frequency, course, symptoms, pathological changes and post-mortem appearances. Dr. Fagge in his able article upon intestinal obstructions[1] states "that in Guy Hospital, in the last fifteen years there had been seventy-five fatal cases, and of these seventeen were from strangulation produced by some solitary omental or mesenteric band."

Dr. Brinton collated 600 cases; of these 31 per cent. were from bands, 43 per cent. from intussusception, 13 from stricture, and 8 from torsion. He gives it as his opinion that most of these cases were subject to surgical relief. Dr. Fagge writes: "I regard the facts derivable from our post-mortem records as indicating no insurmountable obstacle to the success of an exploratory operation in a majority of the cases of true intestinal strangulation which are to be found in these records."

It would be very interesting to pursue this line of inquiry farther; pathological literature, yea, our own clinical experiences are full of significant histories with the added query "of what might have been."

Intestinal obstructions may well be subdivided into, First, The chronic, which is gradual. Second, The late acute which usually supervenes upon the first, and, Third, The early acute. Under these divisions are included impaction of fæces, fibrous and cancerous strictures, polypi, tumors, abscesses compressing the bowel, intussusception and injuries; but we shall discuss only the question of acute obstructions.

The first and most important consideration is not only an accurate but a prompt diagnosis. Every hour brings fresh complications which obscure and render more difficult positive conclusions, and, just as in external obstructions of the hernial class, seriously endanger the well-being of the patient. The comparison with hernia would emphasize the consideration of relegating the entire class of internal obstructions to the surgical domain, upon precisely the same grounds as external obstructions. Both are mechanical and both should be submitted to wise surgical procedure. Within this realm should be included the use of rest, opium, cold applications, and just as appropriately as to a fractured limb or an inflamed knee joint.

Granted that the diagnosis of complete intestinal obstruction has been determined, the earlier operative interference is decided upon the wiser and better. When nothing is done, we are aware a certain number of cases recover, but the percentage under the wisest medical management has ever been small. A twist, an intussusception, an entanglement by a solitary firm band, producing a complete occlusion usually goes on rapidly to danger from local interference in circulation, arrest of nutrition, compression, reflexive suffering, peritonitis, resulting gangrene, collapse and death. This series of symptons is generally one of geometric ratio of progressive dangers. Knowing the end all too well from the beginning, let wisdom dictate an early interference. What may be done short of exploratory abdominal incision?

[1] Guy Hospital Reports, 1868.

The gaseous distension, which causes very much suffering, and often distressing vomiting, may be usually only partially relieved by puncture. We have known a number of cases thus benefited. Even a considerable-sized trocar has been used, and is generally necessary, for the intestinal contents are usually of a thin gaseous character, the gases being intimately blended with the secretions. This is much less dangerous than might have been supposed, since the eversion of the soft, velvety mucous lining with its villi, quite securely plugs the opening through the muscular and peritoneal coats of the intestine made by the trocar, and prevents the exudation of its contents into the peritoneal cavity. The aspirator used for such a purpose is much the safer instrument, since relief may be secured through a smaller cānula. This procedure, if successful, relieves the pressure upon the constricted portion, lessens muscular paralysis, thereby in proportion restoring peristaltic movements of the bowel, which may result in undoing a twist. Dr. Warner's spiral trocar is claimed to be of great value. This is usually palliative rather than curative, and much precious time is lost in awaiting its results.

In intussusception, the old Hippocratic plan of inflation may be tried, and this is much more likely to succeed under anæsthetics. Care must be used not to rupture a weakened intestine. Dr. Thomas Hawkins, of New York,[1] strongly advocates hydrostatic pressure, and gives a number of successful cases. His three rules essential to success are: First, the use of the utmost possible force, but with great care and caution. Second, persistent and continuous repetition of the injection until the passage is effected. Third, the adaptation of a suitable position for the patient. It seems easy to believe that fluid must possess material advantages over air. Indeed, it is a reversal of the old classical remedy of a mercurial column applied from above by its administration per orem.

Such measures having been considered, it remains for us to repeat our emphasis in favor of early gastrotomy. We believe this should never be undertaken without the most careful antiseptic precautions. The incision should be made in the median line, since we can never be entirely certain of the location of the obstruction, and the opening in the median line is not only a safer one for many reasons, but gives the greater advantage for a careful examination of the abdominal contents. The greatest mechanical difficulty lies in the distended condition of the intestines above the obstruction, giving oftentimes great trouble in their control, and by the rolling out of intestinal coils causes exposure of large peritoneal surfaces. This is important to prevent as far as possible, since a rapid lowering of temperature results from such exposure, and may induce shock, and also greatly increases the dangers from germ infection. The aspirator should be at hand on this account, and its use after the incision may prove of the greatest value.

Having rendered manageable the intestines—and this is best done before any large opening is made in the abdominal wall—enlarge the incision sufficiently

[1] *Medical and Surgical Reporter, 1876.*

to make an easy and careful inspection of the parts. Through fear of a long incision, much confusion and damage may and has resulted, by a blind groping after the obstructed portion. This found, be guided by its factorage. If there are long bridles of peritoneal bands, then simple division may be all that is required; if a twist or intussusception, perhaps these are as easily remedied. What shall be done if necrosis of the intestinal tube has already supervened? One of two devices only is left for selection. Artificial anus, i. e. stitching the ends of the canal into the wound, with the hope of some further operative procedure, or resection of the necrosed portion, with a very careful adjustment of the divided ends and mesenteric attachment. This must be done in such a manner as to bring the peritoneal surfaces in approximation, and in this way the wounded edges and mucous membrane are all turned into the intestinal cavity. Silk may be used, but at times proves an irritant. Catgut, if old, may be reliable, but frequently is absorbed too early, and properly prepared animal ligatures are to be preferred.

We are all familiar, indebted especially therefor to the careful studies of Sir Spencer Wells, with the rapid exudative repair processes which take place under the opposed peritoneal surfaces. In one instance, where we resected seven inches of the necrosed small intestine and death supervened thirty hours afterward, the exuded lymph had entirely encircled and covered in the approximated parts.

Having restored the continuity of the intestinal canal, readjust its relationships and close the abdominal wound. This is effected precisely as in ovariotomy, its essential factor being, as with the intestine, a careful approximation of the peritoneal surfaces. For this purpose let the stitches always be taken from within outward, inserting the needle about one-half an inch beyond the divided peritoneum. We believe gastrotomy should never be undertaken without the most careful antiseptic precautions. Many superficial students and opponents of antiseptic surgery refer to the spray as the summum bonum of the method, when, at best, in reality it is a minor factor. He who becomes familiar with the underlying broad principles of sound philosophic reasoning, the careful details of method, and the astounding array of demonstrated facts, will need little urging to give antiseptic surgery his enthusiastic support. Let it be held in remembrance that the whole endeavor of antiseptic surgery is not a wound benefited by carbolic acid or other medication, but thereby to secure a wound free from all germ infection, surgically clean, aseptic in character, as nearly as possible one like in condition to a subcutaneous injury.

If this has been effected, and this is not alone the theoretic aim of Mr. Lister and his followers, but is as a rule a sure accomplishment, then we may rest assured that our patient, if operated upon early, will probably recover. Great care in such operations must be taken not to reduce the temperature of the body, for heat is rapidly lost from the exposure of large surfaces of the peritoneum, and by the retention of its equilibrium a better capillary circulation is maintained, and shock is in large measure avoided.

Hæmorrhage is an exceptional and unimportant complication in this class of operations, since no large vessels are implicated. General and dangerous peritonitis is almost invariably septic, and with the exclusion of this factor, which may, as we have already claimed, be secured, a favorable prognosis can be given. In conclusion, let us be permitted to state that the operative surgeon should be guided by a wise consideration, based upon a thorough knowledge of the whole question, and that he is subject to the gravest of all responsibilities, remembering at the same time that the sins of omission are equally to be judged with those of commission.

ON A NEW METHOD OF OBTAINING PURE PANCREATIC JUICE.

BY L. B. TUCKERMAN, M.D.

[Read to the Section on Practice of Medicine, Materia Medica and Physiology, of Am. Med. Association, June, 1883.]

Physiologists are wont to employ one of two methods in obtaining pancreatic juice for purposes of experiment, viz., the method of Claude Bernard, and that of Ludwig and Bernstein. It is needless here to go into the details of either operation.

The method of Claude Bernard is open to the following objections:

1. Fixing, as it does, a temporary canula in the duct and collecting the secretion while the animal is under the shock of the operation, we can hardly assume the secretion to be normal.

2. This method offers but little opportunity for investigating variations in the character of the secretion dependent upon the period of digestion or upon the animal's diet.

The method of Ludwig and Bernstein is also open to objections, for:

1. The secretion of the fistulous tract kept open by the lead wire mingles with the secretion of the gland.

2. The irritation of the loop of wire in the pancreatic duct must must tend to keep the gland itself in a state of chronic irritation, thus altering the character of the secretion.

3. A considerable part of the pancreatic secretion is permanently diverted from the intestinal canal. This must more or less interfere with normal intestinal digestion and thus keep the animal in a pathological condition, thereby vitiating every secretion.

In view of these objections we think the conclusion of Dr. Flint a sound one—viz., "We are not disposed to admit that the fluid, collected by recent German observers from permanent fistulæ, represents physiological conditions." (Text Bk. of Phys, 1881, p. 271).

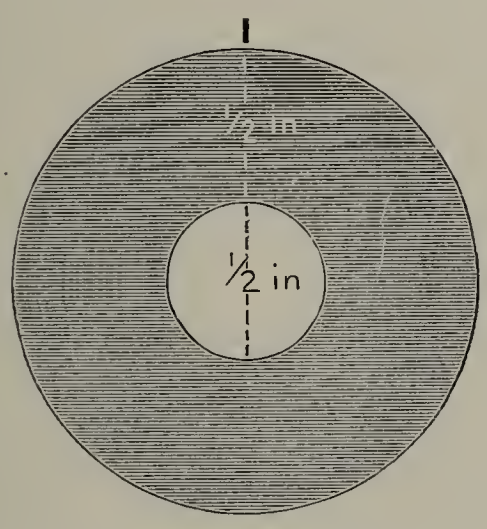
With a view of avoiding, as far as possible, the sources of error above enumerated, we sought to devise a plan by which the pancreatic duct could, like Steno's duct, be catheterized at will. During the past few weeks we have succeeded in so doing by means of a permanent fistula, opening into that part of the duodenum which lies directly opposite the mouth of the pancreatic duct. The outer opening, and the outer flange of the canula used, are precisely

like those of the ordinary canula for gastric fistula. The inner opening, however, is elliptical, its longer axis measuring ¾ inch, and its shorter ½ inch. The inner flange is curved in the direction of the shorter axis of the opening, the radius of the curve being ⅜ inch.

The details of Claude Bernard's method were followed as far as regards opening the abdominal cavity and drawing out the duodenum and head of the pancreas. The duodenum was then opened by a longitudinal incision at a point opposite the mouth of the duct, into which a probe was then passed. The canula was passed over the probe, the long axis of its inner opening being placed lengthwise of the gut. The latter was then stitched about the canula in such wise as to bring the mouth of the duct directly opposite the center of the inner opening of the canula. The position of the mouth of the duct was determined by means of a light thrown down the canula from a head mirror. The parietal peritonæum was then stitched together and to the gut about the canula, and the wound in the abdomen closed.

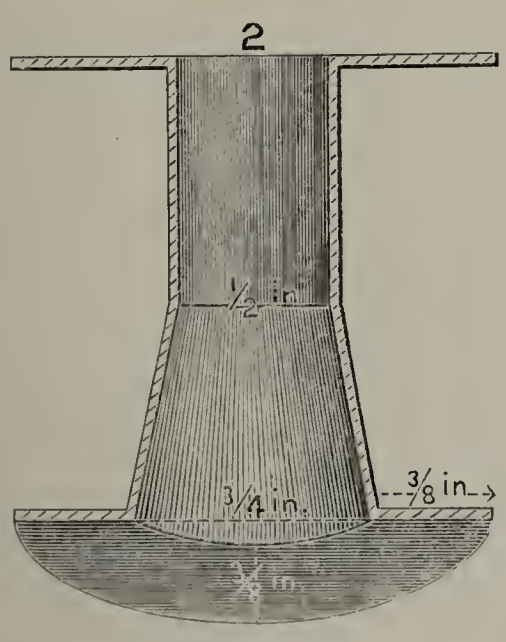
When the animal had recovered, it was found that the mouth of the duct was still opposite the inner opening of the canula.

The accompanying figures will give an idea of the canula, and of its relations when in situ.



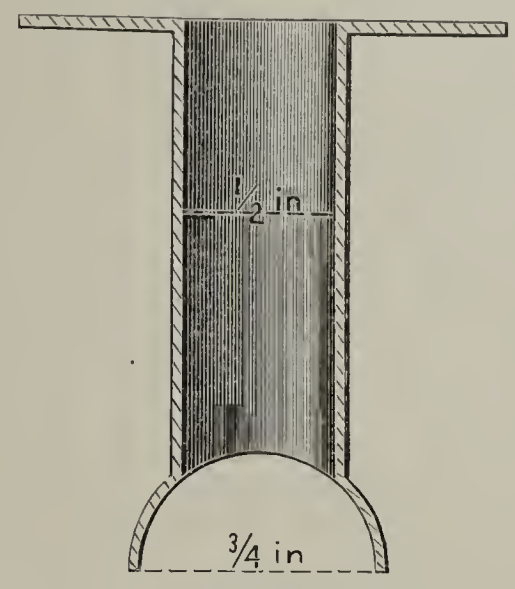
1. Outer flange of canula—natural size.

For catheterization of the duct the animal is laid upon its left side, held still by assistants, and light is thrown down the canula by means of a head mirror. We have best succeeded with a small glass canula drawn down to about one-half inch in diameter and slightly bent about one-fourth inch from the small end.



2. Section of canula in longer axis of inner opening.

The fluid thus obtained is perfectly transparent, distinctly alkaline and with marked amylolytic, proteolytic and emulsive properties. The advantages of this method are—



3. Section of canula in short axis of opening.

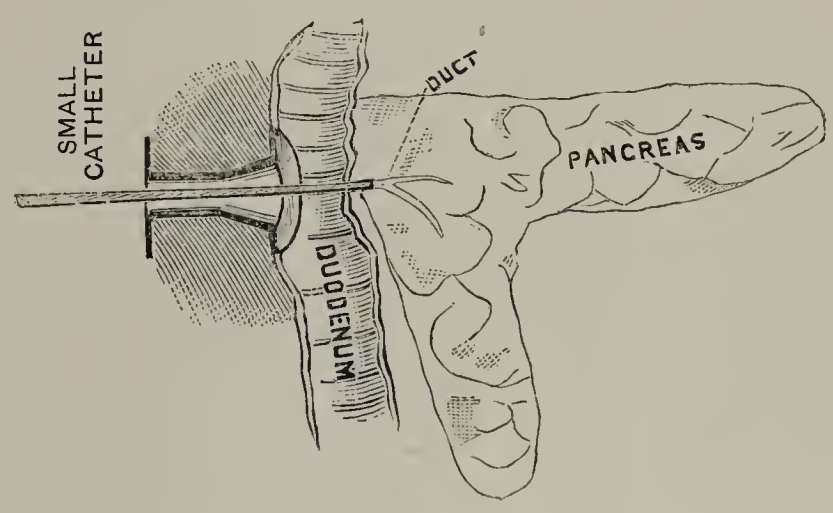
1. The animal is as nearly as possible in a physiological condition.

2. The fluid is obtained without causing the animal any marked inconvenience, and is unmixed with any other secretion.

3. The fluid can be drawn at any time.

The difficulties are: 1. No self-retaining catheter has as yet been devised, hence the experimenter must hold the small canula in place while the fluid is being drawn. This renders no little patience necessary in order to obtain the fluid in quantity.

2. Unless the mouth of the duct has been accurately fixed opposite the center of the inner opening of the permanent canula, the peristalsis of the gut may at times draw the mouth of the duct out of sight. This makes it specially difficult to catheterize the duct while food is passing through the duodenum.



4. Section of duodenum, showing canula in situ with small catheter in duct.

The lines of experiment to which this method would seem best adapted are:

1. To determine what, if any, are the variations in the character of the pancreatic secretion during different periods of digestion.

2. To discover whether difference in diet effects an appreciable difference in the relative amylolytic, proteolytic and emulsive properties of the pancreatic secretion.

3. It may prove useful also, as Dr. H. P. Bowditch, of Boston, suggested to us, in studying the supposed relation of the spleen to the secretion of trypsin.

One other observation is perhaps worthy of mention here. It relates to the behavor of milk in the alimentary canal. Though physiologists tacitly assume that the primary digestion of milk is gastric, Roberis has shown ("On the Digestive Ferments," p. 41) that "tryptic digestion of milk is rapid, and leaves only a slight residue, whereas peptic digestion is slow, and leaves a larger residue;" while Ewald ("Lectures on Digestion," p. 90) has proven that the pancreas, even in new born animals, is very active. Now, in this animal, milk, when fed alone, passes immediately and almost unchanged into the duodenum, where it appears mingled with bile and pancreatic secretion. If more extended observation shall show that the primary digestion of milk is wholly or in part tryptic rather than peptic, taking place in the duodenum rather than in the stomach, we have a physiological basis for a line of treatment clinically successful in certain digestive disorders of infancy, viz.: The exhibition of alkalies and drugs that, like ergot, nux vomica, etc., stimulate the unstriped muscular fiber. In such a case simple atony of the muscular walls of the stomach would seriously retard the process, even though the gastric secretion were perfectly normal. Moreover, one objection to the use of pancreatin, viz.: that it is destroyed in the stomach, is removed, if, when taken with milk or other fluids, it be rapidly passed into the duodenum.

BLOOD-LETTING AS A REMEDY IN THE TREATMENT OF ECLAMPSIA PUERPERALIS AND "ACUTE PNEUMONIA."

BY T. C. M'CULLOCH, M.D., OIL CITY, PA.

On the 2d day of July, 35 years ago, I was called to attend Mrs. John Carson, of Armstrong county, Pa., in labor with her third child.

She was a large, muscular woman about six feet in height and built in proportion. A short time before my arrival, she was delivered of a still born child. The womb was contracted, the afterbirth expelled. There was no hæmorrhage, and she was comfortably "put to bed." I say put to bed, as in those days women were nearly all delivered on the floor on their knees, and afterwards put to bed; apparently she was all right.

Whilst seated at the breakfast table enjoying my morning meal, after a seven mile ride, congratulating myself upon my "good luck," and easy made fee, I was startled by a scream from the nurse, followed by doctor! doctor! On entering her room, I found my patientin a *horrible* convulsion. I say "horrible," for what can be more horrible to the practitioner than a woman convulsed, distorted and blackened by a puerperal convulsion; muscles convulsed, features distorted; respiration gives forth a hissing sound, froth issues from between the clenched teeth, the eyes are rolled upward, and spasmodically jerked from side to side. Truly the condition of the patient is "horrible" and well calculated to strike terror to the friends and alarm the doctor, especially if he is young and inexperienced.

At this period in medical therepeutics, there were but few remedies. Blood-letting, speedy delivery, and opiates in some form, were laid down as the esentials.

The room where the patient lay was small. The head and foot of the bed were wedged in between the wall and the partition, and as each proxysm occurred she actually shook the whole building. I bled this patient six times, once from both arms at the same time, allowing the blood to flow in full streams without regard to quantity. Her hair was cut off and cold applications applied to her head. She was cupped on the temples and back of the neck. She had twenty-three convulsions, occupying a period of twenty-four hours, during which time she was insensible. Her tongue was bitten, lips swollen, and face bloated, presenting an appearance unrecognizable to her friends.

Now, I think I hear the reader say, between the *doctor* and the *disease* she was a pretty well used up woman. But the convulsions ceased and she made a good recovery. She raised quite a large family. Had no return of the disease, but she was always bled once or twice prior to her confinements.

And let me say here that I believe I have prevented the occurrence of more cases of convulsions by timely blood-letting than I ever was called on to treat.

This lady afterwards gave birth to two sons who became prominent physicians — the oldest, Dr. Thomas Carson, who is at this time practicing in Saltsburg, Indiana County, Pa.; the other, the late Dr. John Carson, of Leechburg, Pa., who fell a martyr to his profession during a malignant epidemic of diphtheria, which prevailed in Armstrong county three winters ago. He died from a wound upon his hand, poisoned from the secretion while in the act of swabbing a child's throat.

This case of Mrs. Carson's I give as a typical case of the disease and the treatment thirty-five years ago.

Now, according to more recent views as to the cause, and the pathology of this disease, this was very bad treatment. Has the character of the disease changed? We know that the treatment has changed. But have there been any better results? Let us see. "I speak as to wise men, hear ye what I say." Upon looking over my Obstetrical Register, which I have kept faithfully from the first to the last case, noting all abnormal points in the labor, and writing out in full a history of all bad cases, I find I have seen fourteen cases of this disease, eight of which were patrons of my own; six I saw in consultation with other physicians. Of these eight cases seven were primpara. In one case I performed craniotomy; six were delivered by the forceps. But one, the case of Mrs. C., the child was born before the convulsions took place. All the cases were heroically bled, and all recovered but one.

My first case was in the summer of 1848, my last case was in the fall 1878—comprising a period of thirty years.

Now, this has been my experience with the lance, in combatting this formidable disease—eclampsia puerperalis, and I give it to the profession for just what it is worth and nothing more. You may say that such treatment is barbarous and belongs to the dark ages. I have heard men say so; medical gentlemen, too, who stand high in the profession; men whose hypodermic syringe never becomes rusty for want of use; men who never bled a patient in a practice of ten or fifteen years.

I heard a prominent practitioner not long since relate his experience with the lancet, which I think is too good to be lost. He said some ten years ago he had a case of chronic eczema which he was very anxious to cure. He gave him all the approved remedies. But the stubborn disease resisted all the treatment he could suggest. So he requested a consultation. An old physician was called for counsel, and after giving the old gentleman a history of the case and the remedies he had tried—which nearly exhausted the materia medica—the old gentleman remarked he thought the disease was caused by derangement of the *prima viæ*, and as all other remedies had been tried he would recommend blood-letting. The patient was bled, and he made a rapid and complete recovery—most unexpected result. "Well," said the Doctor, "I began to think there might be something in this 'bleeding business,' so I bought myself a lancet and waited for a case. It came in the form of acute pneumonia. I bled freely, and my patient died promptly. I laid away my lance, and I have never used it since;" remarking he had no faith in a remedy which produced such unexplainable and unexpected results. If it cured the case of chronic eczema, I think it killed the case of pneumonia.

Prof. Charles D. Meigs says in his work published in 1842, called "Philadelphia Practice," that he has met with seventeen cases of eclampsia. Few were first pregnancies. He says: "If there be a case of disease in which a bold and daring use of the lance is demanded, it is the case of the puerperal convulsion." He says: "The patient should lose from 30 to 60 ounces of blood at one venesection."

Dr. Ramsbotham says in his work on obstetrics, published in 1859: "Bleeding is our great reliance. The lancet is our sheet-anchor." All authors up to about this period agree with the two distinguished authors above quoted, and indeed every practitioner who had any claims to possessing a respectable knowledge of his profession looked upon venesection as the "sine qua non" in the treatment of this disease.

Now, I think I hear you laugh, and sneer, and say, "This is old-fogyism — behind the times." Well, I will admit that in the last twenty years there has been great advancement in the science of medicine. New lights have sprung up in the profession. Scientific men, with the aid of the microscope, have seen wonderful things, and by chemical analysis have demonstrated to the profession that "uræmic poison" is the cause of all the convulsions that the parturient woman is heir to. And upon this hypothesis quite a revolution has taken place. The American profession especially have discarded the lance, and passed over to the new theory en-masse, and every pregnant female, who is suspected of furnishing a case of convulsions for the doctor, is requested to furnish a bottle of urine for examination and test. Albumen found is the harbinger of danger, and the physician is alarmed and anxious for the safety of his patient.

This brings to my mind a case I had some few years ago. I was called to attend a young lady in her first confinement. On entering her room I was struck with her appearance—face bloated so she could hardly see, complexion sallow, feet and hands swollen. I knew her when she was a girl, and I could not recognize her to be the same person. I inquired, "Have you any headache?"

"Yes, Doctor, I suffer a great deal with my head."

"Can you make much water?"

"No, not as much as I ought to make."

I made an examination, and found labor just commencing, which caused me to breathe a little easier. As I wanted time to prepare myself for the struggle, as I felt certain I was going to have a case of convulsions, I procured a bottle of her urine and went to my office. I applied the test, and found it highly albuminous. I was now fully convinced. I prepared myself with chloroform, hyd. of chloral, forceps, hypordermic syringe, etc., and awaited the call, which came the same night. On my arrival I found her in hard labor. Every time she turned up her eyes I thought sure she was going off in a convulsion, which made me anxious for her speedy delivery. I dare not bleed, for if I did and my patient died, and I was prosecuted for malpractice, the profession would not sustain me. They would swear she died from exhaustion from the loss of blood produced by the lance; so I resorted to the next best thing—speedy delivery, for all agree that if the woman was not pregnant she would have no convulsions.

Consequently with great difficulty I delivered with forceps a 12-lb. boy. Head squeezed; neck stretched; scalp bruised and tumefied, and to all appearance a dead child. But after some effort to resuscitate, I succeeded, but the child worked in convulsions for two days, caused, I have no doubt, by the abuse it received in hurrying it into the world. The mother got along without a bad symptom; on third day sat up in bed, washed and dressed her boy, and the fifth day I found her seated in a rocking-chair, bright, cheerful and happy. In this case, I got the convulsions in the wrong patient.

Dr. Playfair, in his late work of 1880, says, in speaking of the cause of eclampsia in pregnant women, "that in the more recent investigations as to the cause of death in this disease, the tendency of the profession for the last ten years is back to venesection." The rule is to bleed the patient as early as possible, so as to make a decided impression."

"As time elapses," says the same author, "the evidence accumulates to show that the relation between albminuria and eclampsia in pregnant women is not so universal as formerly supposed; that albuminuria is by no means necessarily accompanied by eclampsia. Cases are abundant where the albumen ap-

pears after the convulsions, the convulsions causing the nephritis."

It is also an established fact that convulsive attacks are common in pregnant women when there are no traces of albumen found in the urine.

The same author says: "The key to the liability of pregnant women to convulsive attacks, is no doubt found in the peculiar excitability of the nervous system in pregnancy, a fact which was clearly pointed out by Dr. Tyler Smith and by many other authors. The nervous system is in this respect not unlike that of children, in whom the predominant influence and great excitability of the nervous system are well established facts, and in whom precisely similar convulsions are of common occurrence on the application of a sufficient exciting cause."

And who, I ask, would think of referring the eclampsia of childhood to "uræmic poison" as a cause?

Whatever may be the pathological condition of the blood, incident to the pregnant state; whatever may be the cause which excites the nervous system to morbid action; whether it be a toxæmic condition, or a watery condition associated or not with albuminuria, in either case says Drs. Franke and Rosenstein: "There is increased tension of the arterial system, which is produced by the hypertrophy of the heart, which is known to be a normal occurrence in pregnancy."

Such being the case, does it not stand to reason and common sense, which by the way are always associated, that venesection, as a remedy, stands first on the list, to relieve arterial tension, and the congested nervous center, by unloading the blood-vessels and subduing the hearts action.

But modern theuputists tell us "we can do that without the lance, which is barbarous in its application. We have veratrum viride, aconite, etc., powerful sedatives to the heart's action.

But the *mischief* will be done before you get the action of your drug. "Well, we have our hypodermic syringe loaded with morphia guarded by atropia, which acts quick and powerful." So it does upon the brain, but not upon the heart.

Where is the practitioner of experience who has not seen a narcotized patient, in which the heart's action was going on regular full and strong, but the brain overwhelmed, respiration ceased when it was very difficult to tell just when the patient died?

Opium, like chloroform, sometimes causes death from an ordinary dose judiciously administered—venesection never, to my knowledge. No one in these days of therapeutic knowledge would advocate the use of the lancet to the exclusion of other remedies. Chloroform, hyd. chloral, bromide of potash, etc., are all right and proper in their place and at the right time, and I should feel as if I had not done my whole duty should I fail to employ them; but I assert here that the practitioner who would stand by the bed-side of a parturient patient having convulsions or the premonitory symptoms of eclampsia, having pain in the head, double or half vision, swollen hands and feet, with turned eye-lids, with a full and bounding pulse, and he failed to extract blood freely and the patient died, and he was prosecuted for malpractice, were I on the jury I would vote for conviction, albumen or no albumen in the urine; and nothing but Bright's disease of the kidneys, in her case being a well-established fact, would cause me to recommend him to the mercy of the court.

It is time medical men should think and be actuated by common sense, and not ride the hobbys of others all their life. I would rather have "three ounces of common sense," exercised at the bedside of a patient, than "ten pounds of finely-spun theory." The former makes a man act wise—the latter makes a man appear wise, but it is argued that the remedy was abused; every person who was sick was bled. Admitting this to be true, it is no argument why it should be abandoned altogether, and not used in its proper place.

Do not the present generation of doctors abuse their patients by their "anti-exhaustive treatment," and by their stimulating, brandy and milk course do more harm than ever the lance did? Why, thousands of patients at the present day, after a protracted illness, come out of the hands of the doctor confirmed inebriates, fit only for bar-room loafers.

Women in former days were bled for headache, backache, pains real or imaginary, and they grew fat, raised large families of healthy children, and lived to a ripe old age.

But in our day the hypodermic syringe has taken the place of the lance, and for their pains and aches they are chucked full of morphia daily. Sensibility deadened, nervous system unstrung, muscular system relaxed, and they become fit subjects of abortion or premature labor. Their children dwarfed and they die at a premature age.

Would it not be better if we would follow more the teachings of nature on this subject? Why, one half of the human family, and the best half at that, by a fixed law of nature, which is God's law, lose from six to ten ounces of blood monthly, and continue to average so for 30 years, being bled not less than 360 to 400 times in their life, for what purpose? To carry off the surplus blood, like a safety valve, to relieve their congested organs.

And yet if a man has double pneumonia, lungs conjested and pressed upon with a pressure of 100 pounds to the square inch, breathing 60 times to the minute, you are afraid to take a pint of blood from him for fear he dies from exhaustion, and you chuck him full of quinine, iron, brandy and milk to support him, and morphia to relieve his pain; and your man dies and you console yourself by the reflection that you gave him the best chance for his life by using the latest and best treatment approved by the profession.

I have, in a continuous practice of over 35 years met with some cases of pneumonia, and I never had a case of primary inflammation of the lung in the adult, but I bled freely in the congestive stage, and although I say it myself, it was very rarely that they did not recover rapidly after one or two decided venesections.

I had an attack myself in the spring of 1858 of acute pneumonia of the left lung. I was bled twice from the arm, cupped and blistered, and I made a speedy

and good recovery. I can remember what a load was taken off my chest at the first bleeding; how the pain ceased; and how easily I breathed; and with a full dose of morphia how well I slept that night. In the last few years, since bleeding as a remedy has been abandoned, nearly all the cases I have seen have been in consultation with other physicians, and the great majority of them were very bad subjects, men who were broken down by strong drink. I saw them in the advanced stage, when the time for bleeding had gone by, if at all admissable in such subjects—seven in number. They all died promptly, full of morphine, quinine, iron, brandy and milk.

Dr. John L. Atlee, our retiring president, in his address to the members of the American Medical Association, at Cleveland, June 5, last, said: "I feel well assured that the almost total disuse of the lance has cost *many valuable lives*. From a very large experience in its use I am satisfied, *fully satisfied*, that if we depended more on the early use of the lance, in the congestive and inflammatory states of many diseases our practice would be made more successful than it now is. It is, in my opinion, a very important subject, and I feel assured that ere long the lancet will be more freely used than it is now." When I heard these words fall from his venerable lips, an old veteran in the profession, brim full of knowledge and wisdom gathered from scientific researches and an experience of 60 years of active practice in the profession, althongh not a Methodist, I could scarcely restrain myself from shouting Amen!

Dr. Davis, of Chicago, says there was during the year 1882, as per the census of 1880, one death in the city of Boston to every 532 of the population; 1 to every 579 in Chicago; 1 to every 441 in San Francisco; 1 to every 1,088 in New Orleans. He says sanitarians should investigate the cause, and suggest some means of checking this fearful mortality. Certainly this is good advice, and upon the principle that "an ounce of prevention is worth a pound of cure," it is well-timed. But I say to you, fellow practitioners, clean up your old rusty lancet, and you that have none buy one; carry it with you to the bedside of the sick, and when you meet an enemy so formidable as eclampsia or pneumonia, stand in the advance guard, strike with your lance one or two decisive blows in the onset of the conflict, and it will do more toward subduing the enemy than all the stimulating nourishing treatment of the present day. "Quit yourselves like men."

MEDICAL PROGRESS.

The Physiological Effects of Coffee.—Dr. J. A. Foot, of Rio de Janiero. (*Bull. Gen. de Therap.* June 30.) Dr. Foot gives us the effects of a strong dose of coffee upon his own person after recording his condition for fifteen days of total abstinence from coffee, and follows his record of the effects of the strong dose, by noting the influence of two cups of coffee daily for twenty-five days. The most interesting part of his paper is his record of the effects of the strong dose. At the time of taking it, his pulse was seventy-two in the morning, reaching eighty-four during the day. He made an infusion of over ℥viij of coffee in a quart of boiling water, drinking the whole of it during the day from 7 A. M. to 9 P. M. During that day the pulse increased in rapidity to 108 in the afternoon, in the evening it reached 114. He went to bed at 11 P. M., but could not sleep, reflex contractions were produced in nearly every part of the body alternately. Very painful cramps in the thighs, legs, feet, walls of the thorax and in the muscles of the hyoid region. These cramps persisted throughout the night, but moderated in severity on the following morning. The tongue was dry and there was a certain degree of constriction in the chest. At the same time there were frequent cramps in the stomach accompanied with nausea. The intestines were the seat of frequent borborygmus, and of an abundant liquid secretion which produced eighteen evacuations. The pulse kept between 110 and 112 through the night. It was intermittent, as was the heart's action, losing one pulsation to every four. The next day the pulse was seventy-six, there was headach and no appetite.

In this experiment, then, the coffee acted on the organs and functions of the central cerebro-spinal system, producing insomnia by exciting the brain, producing the cramps in the muscles, pains in the stomach, disturbance of the intestine and of the heart by exciting the spinal cord, an excitation of the reflex force or excito-motor. He considers that this irritation affects equally the spinal roots of the sympathetic, and in paralyzing the vaso-motor nerves. In this way explanation is given of the cause of the excessive secretion from the intestine and of the abolition of sexual power.

His other experiments with moderate doses, prove to his satisfaction, that the use of coffee does not prevent advanced age and the preservation of good health; and that life seems to be prolonged in the countries where coffee is much used.

Amaurosis from Tumor in the Nasal Cavity Cured by Removal of the Tumor. Priestly Smith. (*Ophthalmic Review*, June, 1883.)—The salient points in the case detailed are that a morbid growth in the nasal cavity caused impairment of sight in both eyes, unaccompanied for a long while by any visible changes in the optic disks, and that the removal of the growth was followed by complete and permanent restoration of sight in one eye. There can be little doubt that the tumor was a non-malignant growth of some kind, as it was completely removed, and there was no recurrence at the end of six years. The seat of the pressure is inferred from the symptoms to have been in front of the optic commissure—for there was no hemiopia, one eye being blinded completely and the other recovered with an entire visual field. It was not within the orbital cavities, for there was no protopsis and no sign of pressure upon the nerves or blood-vessels which enter the orbit in the neighborhood of the optic nerve. There must have been an invasion of the sphenoid cells by the tumor with a destruction of the septum,

so as to exercise pressure upon both the optic nerves in the optic foramina without affecting an entrance either into the orbits or the cranial cavity.

EXPERIMENTAL RESEARCHES UPON THE STRUCTURE OF THE OLFACTORY MEMBRANE. *Christmas, Dire. kinck. Holmfeld.* (*Nordiskt Mediciniskt Arkiv. Bd. XV., No. 7. Comptes-Rendus*).—The section and destruction of the olfactory bulbs causes a destruction of the olfactory cells in the olfactory mucus membrane, whilst the epithelial cells are either not affected, or only after several months. The modification of the olfactory cells consists in a fatty degeneration and a decomposition into molecular granules. This process is more rapid in the warm than in the cold-blooded animals, the changes appearing in the first at the end of fifteen days. In about a month the protoplasm of the cell is filled with fat granules. In four or five months the epithelial cells commence also to degenerate, probably because their function, which is dependent upon the olfactory cells, has been arrested. In the cold-blooded animals the process of degeneration begins at the end of a month, and it is during the second month that the degeneration becomes complete, with no change in the epithelial cells. This would establish the facts:

1. That the olfactory cells should be regarded as the true termination of the olfactory nerves.

2. That the epithelial cells cannot be in direct communication with the olfactory nerves.

3. That the definition given by Max Schultz of the organization of the olfactory membrane is correct, and that the observations of M. Exner are incorrect.

COMPLETE PROGRESSIVE HEMIATROPHY. S. E. HENSHEN, *Nordiskt Mediciniskt Archiv., Bd. XV, No. 7 Comtes-rendus*). The patient was 46 years of age. No nervous affection in the family, with the exception of a cousin who suffered from melancholia. Enjoyed good health up to 14 years, then suffered from a slight sprain of the left foot, followed soon after by erysipelas of the left leg, which was followed in turn by ulcers upon the legs that healed at intervals. Since that time he suffered from pricking and shooting pains in the left half of the body. Six months later, modifications in the extremities and trunk were noted, and six months later still the face was affected. From that time onwards these modifications have become more and more marked. At that period he suffered from very painful headaches. At 19 years of age he was affected with melancholia for a time, after which he enjoyed perfect health. Too years and a half later the melancholia returned. Married at 40. He became the father of a healthy and well-made child.

He has strong limbs and an excellent embonpoint, The left side of the face is sensibly depressed, and as if diminished in size. The cranium above the eye-brows is well formed, and symmetrical, with the exception that the left temporal fossa is deeper than the right. Below the eye-brows the face has a marked want of symmetry, the left side being very visibly smaller than the right. The nose looks as if it were pressed upon from the left, the left cheek is deeply sunken, deprived of fat and marked by radiating wrinkles; the eye is deeply sunken, but sound in other respects. The eyelids have no fat. The left zygoma is atrophied. The skin of the left side is very thin and pigmented. The left superior and inferior maxillæ are markedly atrophied. The teeth have dropped out. The alveolar process of the left superior maxillary is wanting behind the second buccal tooth. The raphe of the palate inclines to the left; the soft palate is partially atrophied on the left. The whole of the right side of the face is healthy, with an abundance of fat.

The neck is symmetrical; the whole of the left side of the neck is a little smaller than the right, but there are three portions which are markedly atrophied—first, between the fifth and seventh intercostal spaces; second, in the umbilical region, between the tenth and eleventh dorsal vertebræ; and third, at the crest of the left iliac bone, including the left natis and extending through a line drawn from the superior anterior spine of the ilium and the trochanter. Over all these parts the skin is as thin as paper, markedly pigmented, and the subcutaneous fat so nearly absent that the atrophied muscle fibers are clearly defined, and there is a consequent depression of the parts. The left arm is atrophied throughout, and shorter than the right, the muscles very much atrophied, particularly the long head of the triceps, which has almost entirely disappeared and is replaced by a tendon of a few millimeters in thickness. The elbow joint and the fingers of the left hand cannot be completely extended, on account of the changes which the articulations have undergone. The right arm is strong and muscular, with an abundance of fatty tissue. The left leg has lost nearly all of its adipose tissue; the leg cannot be extended at the knee, in consequence of changes at the joint; the muscles are greatly atrophied, especially the quadriceps, in which are two ossifications. The whole inferior portion of the leg forms a cylinder of a nearly uniform thickness, giving a circumference of 19.5 to 16.5 cm., in comparison with the right leg of 38 to 24 cm. The muscles have nearly disappeared, and over the bones the parchment-like skin is closely adherent in part, of an ivory whiteness and in part pigmented. The skin is wanting in hair and sudoriporous glands. Anchylosis of the tibio-tarsal articulation.

Tactile sensibility has undergone no change. The left leg is more sensible to cold and to electric irritation. The patient suffers in the parts attacked from frequent fibrillary spasms, contractions, etc. There is nothing remarkable about the internal organs.

TREATMENT BY ARSENIC OF LEUCÆMIA, PSEUDO-LEUCÆMIA AND OF PROGRESSIVE PERNICIOUS ANÆMIA, ETC. F. W. WARRINGE. (*Mordiskt Mediciniskt Archiv. Bd. XIV., No. 7, Comptes rendus*).—During the four years that the hospital of Sabbatsberg, at Stockholm, has been open, two cases of leucæmia, seven cases of pseudo-leucæmia and seven cases of anæmia have been treated with arsenic

by Warringe with favorable results. After giving the comparative details in each case, which we omit here, the writer considers them as of a com mon origin, and passes in review the principal symptoms and the alterations in their pathological anatomy, dwelling principally upon the modifications in in the blood. Whilst these cases present quite marked differences in the quality of the blood, they present a characteristic in common in the diminution, in number of the red globules, which is due to an abnormal destruction. He sees in this modification of the blood the primary alteration, regarding as secondary alterations by dycrasic irritation, as much the modification of the cord, as the hypertrophy of the lymphatic glands and spleen, and the lymphatic heterotopic neoplasms.

As to the alteration in the cord, so well recognized in the leucæmia, the writer has found it in all the cases of pseudo-leucæmia and pernicious anæmia where an autopsy has been held, and he considers it as common to the three affections. They have also in common the anæmia with the cachexia, the disposition to hæmorrhages, particularly of the retina, to œdema and to transudations, as well as to fatty degenerations of the different organs, particularly the heart. These diseases are identical in their onset, their progression and their mortal termination, if proper treatment does not intervene. They possess in common a marked tendency to relapses. Moreover, they are all three equally free from any appreciable cause. In this respect the author observes that they sometimes run an acute course, and that then they bear certain resemblances to acute infectious diseases; that when they are more chronic their onset and course are often of a nature to reach also infectious diseases. It is probable then, he says, that we have to deal with specific infectious diseases, or rather with *a disease* of that character, presenting itself under different forms.

On the Use of Powdered Beef's Blood in Alimentation.—Blood exercises a stimulating action upon the digestive organs and upon the whole organism. This may be due to its extractive matters, to its salts, or to the iron which it contains. It is generally considered to be difficult of digestion; but this may be due to the fatty substances which are so commonly taken with it. Dr. Guerder has administered his preparation to 51 persons; 44 continued its use for several weeks without suffering any inconvenience; 3 vomited it immediately, and 4 digested it with difficulty, suffering from a sense of weight in the stomach, from eructations, and some hours later discharged it undigested. The 3 were convalescents from typhoid fever; the 4 were chlorotic. The taste of the blood, without being positively disagreeable, is unpleasant to many persons, and can be disguised by the addition of aromatic powders to suit the individual. It does not do to give more than a certain quantity. The writer gives, three times daily, to children, 7 to 8 grammes; to adults, 20 to 25 grammes. These doses are generally well tolerated and suffice for a rapid reconstitution of the organism. Seventy to 75 grammes of the powder are equivalent to 500 grammes of fresh blood.

The preparation of the powder of blood requires great care. Dr. Guerder employs only the blood of the beef, for the blood of the sheep gives a disagreeable odor. The blood is taken very fresh, difibrinated, evaporated 4 to 5 hours, and dried slowly in a current of warm air at a temperature of 40 to 42° C.? (104 to 113° F.) The preparation takes a long time, at least three days, and can be done quicker by compressing the pasty mass of evaporated blood in linen, but then the risk is run of removing the soluble portions which contain principally the saline matters—the presence of which play an important part in the dissolution and digestion of albuminous substances. The dried blood now presents itself in a lumpy form, and is reduced to a powder by means of the pestle. It is then again placed on the stove to remove every trace of humidity. It may be questioned if the pulverizing by means of the pestle may not act upon the albuminoid matters of the blood so as to diminish their solubility, but the powder produced dissolves more readily than the mass, and there seems to be no difference in their digestibility. The blood powder may be given at meal time, and, by preference, in some cold liquid, as water, wine, milk, or black coffee. To children it may be given in syrup. Heat develops its peculiar taste and renders it more difficult of absorption.—Dr. Guerder, *Bull. Gen de Therapeutique*, May 30, 1883.

The Toxic Properties of Nitro-Glycerine and of Dynamite. Dr. Brown. (*Bull. Gen. de Therapeutique*, May 30, 1883.)—Prof. Brown in 1877 was physician to a foundry where cannon were made, and hearing the officers of artillery complain of the violent headaches which resulted from the handling of dynamite, resolved to make certain experiments upon himself.

1st. He kept the contents of a cartridge, 100 grammes, upon his work-table for several days, agitating them constantly with a paper-cutter. No effect, showing an absence of all danger of absorption in the form of vapor or fine dust.

2nd. He kneaded a small pinch of dynamite in the hollow of his hand for five minutes. Almost immediately he felt a slight painful numbness along the radial nerve from the base of the thumb to the middle portion of the forearm. Two hours later, tension over the forehead and maxillary tissues, with a ringing in the head, like the commencement of a coryza.

3rd. He rolled a pinch of dynamite between the thumb and index-finger for a quarter of an hour. A half hour later there was painful sense of tension in the sinus of the nasal fossæ and in the forehead. All day, this being tried at 8:30 A. M., there was a feeling of slight headache. At 4 P. M., on going out into the air, this passed off.

4th. For a quarter of an hour rubbing with force in the palm of the hand a small quantity of dynamite. In ten minutes strong tension in the temporal and parietal regions; pain in the forehead; heat of face; painful arterial pulsation in the neck and at the temples; slight nausea; slight giddiness. This

was tried at 2:30 P. M., and some of the symptoms persisted until bedtime.

5th. At 2:30 P. M. placed a piece of dynamite on the tip of the tongue, of the size of a small lentil. At first the taste was sweet, then agreeably acid, and finally burning. He then spit it out, having taken care not to swallow, and got up to wash out the mouth with water, when he was taken with a vertigo which obliged him to hold on to the furniture. The occiput was the seat of a heavy pain; the skull seemed to dilate until it would split open; the heart beat violently and rapidly; the arteries of the neck and temples were distended and beat with excessive violence. There was anxious respiration and slight nausea. He was obliged to make an effort to analyze his sensations and transcribe them. No disorder of urine.

In five minutes cephalic and cervical tension diminished. Pulse 80 and irregular. In a half hour no symptoms other than the cephalic; in an hour nausea on walking, frontal cephalgia, weakness, fatigue and constant yawning. That evening he dined out in company, drank several glasses of different kinds of wine and a cup of coffee, which seemed to remove all the symptoms. The next day he felt a disturbance in the head, and the need of quiet, rest and sleep.

PALATABLE DRUGS FOR CHILDREN.—Dr. Frederick Churchill has an article on this subject in the *British Medical Journal*, for June, 1883, a consideration of which, although the matter in itself is not new, may be of use in reminding us that we can make medicine agreeable, and despoil our homœopathic neighbors of some of their success. Thus, as the ailments under which children for the most part suffer are due to over-feeding and to neglect of the calls of nature, in treating habitual torpidity of the bowels the best method is not medicine, but an enema of soap and water, with occasionally a little castor or olive oil added to the injection. This failing, we fall back upon castor oil, administered internally. Fortunately, we are enabled to give it absolutely free from taste or smell, while it retains its full aperient properties. Shaken up with three or four times its bulk of hot milk, the viscidity of the oil is avoided, and the emulsion produced is scarcely distinguishable from warm rich milk. In giving a compound rhubarb pill, an ordinary five grain pill can be cut up and broken into pieces, which are buried in a chocolate cream. The medicated fruit lozenges are very useful, as tamarindien, which probably contains podophyllin, and of which only a small portion must be given to a child. The compound liquorice powder, containing senna powder, may be given by the teaspoonful, stirred up with warm milk at bed-time, and a little chloric ether added (10 to 20 drops). Fluid magnesia or calcined magnesia, flavored with syrup of orange, is generally acceptable. Rhubarb mixed with bicarbonate of soda, each five grains, is easily given in jam or honey. Decoction of aloes rubbed on the stomach of an infant, will sometimes suffice to procure an action of the bowels; in giving it internally, the extract of liquorice will mask its bitter taste. This bitter is not objectionable to children, for Dr. Churchill notes that they sometimes lick off the aloes from their fingers, when put on to prevent them from sucking them. Powdered aloes, about half a teaspoonful may be given, mixed with brown sugar. The electuary of senna is taken without difficulty; also the syrup of senna, and the infusion with prunes. The effervescing purgative lemonade is a very agreeable drink, as also half a seidlitz powder flavored with lemon juice.

The febrifuges are generally pleasant to take, and the aromatic syrups form agreeable adjuncts. Cough mixtures are made pleasant by the addition of syrup of squills, and of tolu. In tonics the bitter flavor must be disguised. The saccharated carbonate of iron and steel wine are taken very well. Quinine is well disguised in syrup of orange.

THE USE OF AMMONIATED CHLOROFORM. (*Lancet*, June 9, 1883.)—Dr. B. W. Richardson successfully used as far back as 1853 a combination of the vapors of chloroform and of ammonia in the so-called phagædenic croup where there was a refusal to swallow medicinal doses of ammonia; he produced a gentle narcotism with the combined vapors, and was then able to increase the quantity of ammonia considerably. He kept up the inhalation for fourteen hours, administering food by enemeta. In studying a theory that zymotic diseases ought to be controlled by inhalation, he found that each of these vapors in its separate state was a remarkable antiseptic, and that the two acted admirably in combination. Now he uses this combination in zymotic fevers, and it seems to promise valuable results. He takes an alcoholic solution of ammonia (838 alcohol saturated with ammonia) and mixes it in equal parts with chloroform or methylene bichloride; any separation of water is removed. Two fluid drachms are put into a small Wolff's bottle, which is connected with a leather inhaler armed with an expiratory valve. In a puerperal case free inhalations were used every two hours for three days without the slightest discomfort and with obvious direct advantage. The effects of the inhalation seem to extend in four directions: First, under the sedative action of the narcotic relief from pain is obtained, and repose, if not actual sleep, is secured. Second, under the combined influence of the vapors there is reduction of temperature Third, under the influence of the ammonia there is a sustained fluidity of the blood and a production of freedom of secretion. Fourth, under the action of the combined vapors there is an antiseptic result which is always favorable.

ORCHITIS, WITH SLOUGH OF A PORTION OF THE TESTICLE, FOLLOWING TYPHOID FEVER.—Mr. C. E. Harrison, *Lancet*, June 9, 1883, describes a case of this rare sequela of yellow fever, coming on seven weeks after the onset of the fever, where the slough reached the size of an almond, separated, and the wound healed completely.

DEATH FROM AIR IN THE VEINS AFTER PARTURITION. (*Lancet*, June 9, 1883.)—Hindo woman admitted to Kaira Gaol Hospital, under the care of Surgeon Davidson, Indian medical service; natural

labor, female child, head presentation, placenta came away at usual time; no post partum hæmorrhage. About three-quarters of an hour arterwards the woman died, without any ostensible cause; no hæmorrhage, no convulsions. She had been taking some nourishment, when she suddenly fell back and died. Post-mortem two hours after death; uterus empty, with large and somewhat distended veins; right side of heart contained a quantity of air mixed and churned up with blood, and which escaped in bubbles; lungs congested; all the other organs were normal.

Milk in the Male Breast. C. H. Von Klein, A.M., M.D. (*Cincinnati Lancet and Clinic*, June 30.)—There have been several articles in the medical press recently giving cases of the secretion of milk in the breasts of the virgin and other females where pregnancy did not precede it. Dr. Von Klein adds his quota by giving two cases where milk was secreted in the male breast. The first was in a man aged 41, fine physique, height 5 feet eight inches, weight 190 pounds, suffering from hydrocele. The flow of milk was induced from attempts to quiet a restless infant by introducing the nipple into its mouth. After several weeks had elapsed the breast became larger and harder, and the milk began to flow in sufficient quantity to nourish the child, and this was kept up for five months, when it was stopped from the intense pain felt in the testicles—a crawling sensation. The testicles eventually atrophied and disappeared entirely, the patient enjoying good health, meanwhile having been cured of his hydrocele by an operation.

The second case was one simply of observation of a Russian peasant nursing a child, and occurred during the Turco-Russian war, with no special details.

The Collective Investigation Movement.—The *British Medical Journal*, for July 7, devotes an editorial to this subject, in which it congratulates itself that the work has already been taken up by the medical profession in Germany and in America. At a meeting of a leading Berlin medical society (Verein fur Innere Medizin), held on May 21, the President, Professor Leyden, submitted a report drawn up by Dr. Frantzel and himself upon the subject of a collective investigation, and suggested that an inquiry should be instituted concerning phthisis, of a very elaborate and exhaustive nature, including its hereditary transmission, the sanitary and other conditions under which it occurs, its connection with disease in the lower animals, its contagiousness, its curability, and its relation, if any, to acute pneumonia. In commenting on this, the editor gives as the chief aim of the collective investigation, as applied to the main body of the profession, the collecting of simple, every day facts, that can be easily observed and recorded, and which are of value only from their number, and not from the importance of individual observations. The questions suggested for the profession in Germany are of a more intricate and difficult character, so that the value of each observation must be judged by the skill of the observer. The movement in this country, as brought forward by Dr. Billings in the Association, is evidently looked upon with much interest. In Great Britain a wide area is already covered, not only in the British Isles, but in Australia, in India, in Jamaica, in Egypt, and in all parts where the British army and navy medical officer is sent. Among those officers alone are over 400 observers. In Australia there are 240 members.

A Tumor of Hair Removed from the Stomach of a Young Girl by Gastrotomy.—Von Schönborn. (*Pester Med. Chir. Presse*, 1883.)—A fifteen-year-old somewhat anæmic and nervous girl, who since her tenth year had suffered considerably from chlorotic troubles, which for the last three years were associated with acute indigestion; for the last year and a half an extremely movable tumor was noticed in the abdominal cavity, which was by some taken for a movable kidney, notwithstanding the fact that some of the symptoms were not in accord with the diagnosis. The pains finally became so severe that laparotomy was performed, when the tumor in the stomach was found to be made up of short hairs, mixed with vegetable cells, starch grains, etc. It weighed 283 grm., and was 13½ ctm. long, 10½ ctm. broad, and 5½ ctm. thick. The tumor was compact, and superficially very black. The result of the operation was complete relief. The patient acknowledged that for the past four years she had been in the habit of biting off the end of her hairs and swallowing them. The majority of her schoolmates did the same, believing it would give them clear voices. The reporter finds seven similar cases in the literature of the subject, and one case where a malignant tumor of the stomach and intestines proceeded from this cause.

On the Treatment of Spinal Curvature by Reclination in its Early Stages.—Mr. Edward Lund, F.R.C.S., Professor of Surgery in the Owen's College, Victoria University, Manchester, writes:

"I hope to exhibit, at the forthcoming meeting of the British Medical Association at Liverpool, a form of couch for the treatment, by reclination, of spinal curvature in its early stage, and weakness of the muscles of the spine, which embodies in its action a principle of treatment for such cases too frequently overlooked.

"The couch which I have to recommend, and which will be shown at Liverpool, is designed to carry out by reclination the same principle of treatment as operates in the method of vertical suspension, only in a more gradual and prolonged manner. I have called my couch the 'slippery couch,' and I think the construction and mode of action will justify the term. I have used it with marked benefit during the last few years, in more than thirty cases, in private practice. It is made in this way: A piece of wood is prepared, of suitable thickness, and about six feet long and eighteen inches wide. At about four inches from one end, a hole is cut through the wood, of circular form and six inches in diameter, with its margin on one surface of the wood slightly bevelled inwards. This end of the surface of the wood is to be the upper or higher part, when it is fixed at such an inclination by means of a block or cross-piece as to raise it about one foot at the higher end. It is

well to have four wooden legs screwed on, one at each corner, the upper pair being longer than the lower in the same proportion; and to still further influence the angle at which the couch is to be used, by means of extra screw holes in the wood; the longer pair of legs being brought nearer to the foot of the couch, a greater elevation can be secured. The flat piece of wood being so prepared, is covered with several folds of soft thick blanket to about two inches in thickness, the blanket being just the size of the wood, on one surface only; over this a piece of well polished black horse-hair cloth is stretched, and being turned tightly over the edges of the board, is nailed underneath, so as to produce a smooth, somewhat soft, but yet slippery, almost polished surface. Where the blanket crosses over the hole already described, it must be cut across in two directions, longitudinally and transversely, and the horse-hair cloth should be left loose over the same spot, so that, if pressure be here applied, an indentation will be quickly made.

"Now, if a couch be prepared in this way, and placed at such an angle of elevation as I have here described, about one part in six of its length, a person lying upon it on his back will soon find, unless he make some effort to resist, that he will quietly slide down toward the lower end of the couch; and if his attention is otherwise absorbed, he will have his feet over the end of the board, as he is sliding beyond it. By a very simple device this tendency to slide or slip downwards may be very beneficially utilized for the object we have in view.

"A small, firm, cylindrical pillow is prepared, about the diameter of the wrist, and a foot in length, and this is attached by strong tapes, one at each end of the pillow, and fixed to each upper corner of the couch, the length of the tapes being such as to place the pillow transversely on the board immediately below the lower edge of the hole in the wood. With this pillow in position, and the patient so placed that the pillow may be received into the recess of the nape of the neck, the projection of the occiput falling into the depression made by the hole in the wood, the body is retained in position, and the sliding down is prevented, but yet there is a constant gentle dragging action on the spinal joints from the weight of the pelvis and lower limbs, which will act most favorable in the required direction.

"It is desirable, when a patient uses this couch for the first time, that he should try it without the pillow; and, if needful, the elevation of the couch should be adjusted until the peculiar sliding movement is experienced. Then, with the help of the pillow, and the back of the head falling into the recess prepared for it, the patient will be aware of the principle upon which the couch is intended to act, and be more likely to continue its use.

"All other couches, such as the Ilkley couch, and couches with a double angular bend to support the knees, or with a foot-piece against which the feet can rest, are entirely opposed in principle to the plan of this 'slippery couch.' Using them, the patient may feel rested and experience some temporary relief; but I know of no way, by reclination, to secure a certain degree of spinal extension, better than to fix the upper segment of the vertebro-cranial axis at one spot, and allow the weight of the lower part to induce direct 'self-extension.'"—*British Medical Journal.*

THE RISKS OF "MASSAGE."—Dr. Julius Althaus, M.D., Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park, deprecates the abuse of massage, a practice often now employed where it can be of no service. "It is well known that at various times epilepsy, idiocy, and some forms of insanity, have been treated by massage and gymnastics; but, fortunately, we now hear very little of such therapeutical aberrations.

"It appears to me that diseases of the brain and spinal cord must, on account of the anatomical situation of these organs, be inaccessible to the influence of massage, which can only be applicable to more superficial parts of the body. Apart from this, however, it is important to consider that many of the most important diseases of these organs are of an inflammatory or irritant character, either primarily or secondarily; and this should make it self-evident that massage should not be used for their treatment, even if the suffering parts could be reached by it. I will here only allude to many forms of cerebral paralysis from hæmorrhage, embolism, and thrombosis, which are followed by sclerosing myelitis of the pyramidal strands; and most forms of primary lateral, posterior, or insular sclerosis of the spinal cord.

That which may be good for developing and strengthening healthy muscles, or muscles which have been enfeebled by disuse or certain local morbid conditions, etc., is not for that reason suitable for the treatment of muscular paralysis owing to central disease. In most cases of lateral and insular sclerosis, which are, unfortunately, now much treated with massage and exercises, rest is indicated rather than active exertion; and overstraining of the enfeebled muscles acts prejudicially on the state of the nervous centers. I have recently seen quite a number of instances in which the central disease had been rendered palpably worse by procedures of this kind; and, in a case of cerebral paralysis which was some time ago under my care, the patient had, after four such sittings, been seized with collapse, which nearly carried him off."—*British Medical Journal.*

THE INFLUENCE OF CALOMEL ON DIGESTION.—Dr. Vassilieff has found, from experiment, that the presence of calomel, at least up to the amount of five grammes, in the alimentary canal, does not interfere with the gastric juice, nor affect the triple influence of the pancreatic fluid on albumen, fat, and starch. Calomel prevents all other changes in nutritious substances, save those produced entirely by the digestive secretions, decomposition and retrogressive processes in albumens being entirely checked. Calomel also prevents butyric acid fermentation, as Vassilieff found by experiments on cheese. The action of calomel readily explains the cause of the green color of feces passed by patients to whom that drug has been administered. Hoppe Sezler rightly attributed this coloration to the presence of unaltered bile. These researches are described at length by Dr. Vassilieff in the *Zeitschrift fur Physiologische Chemie*, vol. vi., page

112. He has found that this drug prevents the development of micro-organisms in the digestive fluids, and also destroys any bacteria and micrococci already developed.—*British Medical Journal, July* 7.

ACUTE GOITRE.—Surgeon Major Gore, *Edinburgh Medical Journal*, records thirty cases of cure of this disease among the soldiers of a native Indian regiment, by biniodide of mercury, rubbed in for ten minutes or more, as the patient sat with the enlarged gland exposed to the sun or a strong fire. In some of the cases the swelling had been observed for about ten days before treatment. Only one case was any length of time in hospital, viz.: 79 days; an anæmic man, aged 22. The average duration of the treatment was 22.6 days.

DRAINAGE OF THE UTERUS.—Dr. Schwartz considers that the uterus, when affected by a catarrh of the mucous membrane, is in a condition to produce collections of purulent material, the ready relief of which depends upon the rapidity and facility of its discharge. For the past three years he has attempted to establish a perfect drainage in uterine affections, at first employing rubber tubes, but without much benefit; he then used tubes of twisted glass, obtaining a freer and more fluid discharge, but it was always bloody. This was due partly to the thickness of the tube, and partly to a knot made at its inferior portion. Finally he used fine bundles of glass threads, perfectly smooth, with success. He begins his treatment with a very small drain, to determine the degree of uterine irritability, then increases its size as occasion demands, using a drain six to seven centimetres long. At its superior is a small knot, or it is simply curved to retain it in place—the lower portion is secured by a thread, so that the patient herself can remove it. The tube is introduced by means of a sound, after being covered with a fine layer of iodoform. The length of treatment depends upon the characteristics of the cervix and the results obtained. For mechanical dysmenorrhœa and endometritis, the drain remains for months, being changed every three or four weeks. In amenorrhœa, or insufficient menstruation, the drain is introduced a few days before the catamenial period and removed a few days subsequent to it. Dr. Schwartz has found this method very useful in the catarrh consequent upon an incomplete retrocession of the uterus after a normal labor, or after abortion, the secretion generally increasing a little, becoming more fluid and disappearing after a few weeks. When the uterus does not return to its normal state it becomes much smaller and firmer. The treatment is painless, with the exception of slight colics.—SCHWARTZ. *Centralblatt fur Gynækologie*, March 31, 1883.

MISCELLANEOUS ITEMS.

Professor Virchow has been so much criticised by the Congress of German Physicians, for allowing a testimonial by him of a recent remedy to be published, that he has withdrawn from the Society. The proprietor of the pilulæ helveticæ sent specimens to Professor Virchow requesting him to try them. He was in need of something of the kind himself and accordingly gave them a trial. The result proved so satisfactory, that he wrote a note to the manufacturer stating the fact, but giving no permission to print it. Without authority from Professor Virchow, however, the letter was printed and very widely distributed. Virchow felt that under the circumstances, the remonstrances of the Congress were unwarranted, and consequently withdrew from it.

THE newly organized Medical Department of the University of Colorado, proposes to maintain a four years course of nine months each. This is a most excellent requirement, and we hope the University will fully maintain it. Another provision of the College we can not as heartily commend. The instruction is to be free and open to persons of either sex. Education of any kind beyond that of the common schools should not be free. A person who is unable to pay his own way while getting an education has not got life, energy and intellect sufficient to make him deserving of a broad, liberal education or worthy of a position in the ranks of professional men. The co-education of the sexes in medicine has not proved successful elsewhere in this country, and it is doubtful whether it will be possible to maintain it in Colorado without difficulty.

WE noted sometime since, that the Professorship of Hygiene, in the John Hopkins' University, had been offered to Dr. John S. Billings, but, as was then suggested as probable, he has declined the offer, as according to the regulations of the army he could not retain his position in it and continue his work in the library of the Surgeon General's office, and at the same time hold a professorship in any college. Although not occupying the professorship, it is not improbable that he will lecture at least during the coming winter on that subject at the University.

A PRIZE of 5,000 francs has been announced for international competition, to be known as the Bufalini Prize. It is established according to the wishes of the late Bufalini, Minister of Public Instruction in Italy. The subject for 1883-4 is the "Application of the Experimental Methods to Science." The essays must be presented to the Secretary of the Medical Faculty of Florence before October, 1884.

THE Riberi prize of 20,000 lire has been awarded by the Royal Academy of Medicine, at Turin, to Prof. Giulio Bizzozero, for the best essay on physiopathology of the blood.

DR. LEOPOLD has become director of the Maternity hospital in Dresden, a position made vacant by the removel of Dr. Winckel to Munich.

THE American Association for the Advancement of Science is now holding its meetings at Minneapolis, beginning August 14.

PROF. C. WEDL has been made rector of the University of Vienna for 1883 and 1884.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, AUGUST 18, 1883.

TRI-STATE MEDICAL SOCIETY.—In regard to this Society we have received the following card from the officers, which will interest many of our readers in three States. We hope those interested will have a good and profitable meeting, and send us for publication all the good papers and reports that may be read. They can find no better medium for reaching the profession in all parts of the country.

The Tri-State Medical Society will meet in English's Hall, at Indianapolis, on the 18th, 19th, and 20th of September, 1883, commencing at 9 A.M. Excursion rates have been secured on the following railroads; C., C., C. & I.; Cincinnati, Indianapolis, St. Louis & Chicago; Cincinnati, Wabash & Michigan; Indianapolis & St. Louis; I., B. & W.; Wabash, St. Louis & Pacific; Indianapolis & Vincennes; J. M. & I.; Pittsburg, Cincinnati & St. Louis; Vandalia, Evansville & Terre Haute; Ft. Wayne, Cincinnati & Louisville.

Hotel Accommodations—The New Denison, Grand, Bates and Brunswick have reduced their rates for the occasion, and everything promises a very large attendance. Many papers of great interest will be presented. For further particulars address Thos. B. Harvey, M.D., Indianapolis, Chairman of Committee of Arrangements.

G. W. BURTON, M.D., *Secretary*,
WM. PORTER, M.D., *President*, Mitchell, Ind.
St. Louis, Mo.

A SAFE ANÆSTHETIC.—We find the following paragraph in the newspapers. It is very doubtful, however, whether any agent that is capable of producing complete anæsthesia can be considered safe in all persons who may be in apparent health:

"Dr. W. K. Mayo, a Boston dentist, is said to have discovered a new anæsthetic devoid of the serious defects of those in common use. Its inbreathing is agreeable and safe. It produces absolute insensibility to pain, long enough to permit the most delicate operations, preserves the pulse at its normal condition (a little higher than usual, perhaps), and admits of immediate recovery from its influence without any sense of nausea or dizziness."

CHOLERA.—Although official reports concerning the progress of cholera in Egypt are no longer made, and consequently we have no means of knowing accurately the number of deaths in the places of its prevalence, yet the indications are that the epidemic is slowly subsiding, and Western Europe remains up to last advices free from the disease. In the meantime, there are no evidences that bowel affections have been more prevalent or fatal in our principal cities during the month just past than the usual average. It is the part of highest wisdom, however, for all parties, including both governments and people, to use all reasonable precautions against the introduction of infectious diseases from without, and still more to remove all internal sources of filth and impurity of soil, water, or air, that are capable of removal. Such a course will always pay, in lessening the suffering and mortality from ordinary diseases, if no extraordinary epidemics were threatening an invasion.

YELLOW FEVER.—This scourge continues to extend its prevalence in its native territory, the West Indies, and to come in infected vessels to several of our Gulf and South Atlantic ports. Thus far, however, it has not succeeded in getting beyond the quarantine stations; and unless the atmospheric temperature should be unusually high during the next six weeks, there is a strong probability that our country will escape any considerable prevalence of the disease the present season.

CORRESPONDENTS.—In the absence of mature arrangements for regular correspondence from our chief cities and medical centers, we have thought best to publish such letters as we have been favored with, especially when they contained some criticisms on our own work in connection with THE JOURNAL. It was on that principle that we admitted the letter in relation to advertisements, though objectionably personal in regard to one of the best drug manufacturing houses in the country. Also the letter of Dr. Fite

in this number, which is certainly written in a vein of intolerence of opinion regarding questions of great importance, which are not only still on trial on both sides of the Atlantic, but concerning the value of which the wisest and most learned of past generations have differed as widely as those of the present. We will be pleased to receive communications from any and all sources, and will endeavor to treat all honestly expressed opinions on topics of interest to the profession with liberality; but we earnestly request all writers to cultivate the habit of treating the views of others with the same respect as they would ask for their own.

THE CONVENTION OF MICROSCOPISTS. — In this number we complete an interesting account of the proceedings of the National gathering of those specially engaged in microscopic investigations. The meeting was a highly interesting and profitable one, and our readers may be favored with some additional matter gathered during its progress.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—This important National Organization of Scientists is holding its Annual Session in Minneapolis as we go to press with this number of THE JOURNAL. We expect to favor our readers with some account of its doings in our next number.

BACK NUMBERS.—Inquiries still come whether members who now pay up, or non-members who subscribe, can have the numbers from the beginning. To all such we answer, yes. Complete files can be supplied, and missing or imperfect copies cheerfully replaced.

CORRESPONDENCE.

IS QUININE AN OXYTOCIC?

WEAVERSVILLE, N. C.

There has been, and is yet, a controversy among medical men as to whether quinine has oxytocic properties or not, some contending that it has such beyond doubt, and warning the profession to be cautious in its use in cases of pregnancy, and others equally learned and experienced affirming that it is a mistake that quinine has no such theraputic action. May not both sides be correct, as the idiosyncracies are so very different? I once had a patient that neither quinine or ergot had any effect upon, but the decoction of uva ursi acted quickly and with power. I have a female friend to whom spirits of turpentine is more poisonous than the rhus toxicodendron—even a few drops, in lineament, rubbed on the hand, in a few hours will inflame her arm to the shoulder, producing the same effect as a thorough application of the poison from the poison ash. Now, if the idiosyncracies of persons are so very different, may not quinine act upon some women as an oxytocic, while it would have no such effect on others? My own experience is, that it acts as an oxytocic on about one in ten, while you may give it in large or small doses to the other nine in any state of pregnancy, or even at delivery without any effect in that direction.

From all the facts before me, together with my experience, my conclusion is that we should be cautious in its use, unless we know precisely the effect it has, by direct observation, on the woman to whom we are about to administer it, but if we know that it has no oxytocic effect on our patient, then we may give it with impunity. J. A. REAGAN, A.M., M.D.

ENLARGED TONSILS.

STONE MILLS, N. Y., July 25, 1883.

EDITOR N. S. DAVIS—*Dear Sir:* I notice in THE JOURNAL an item in regard to the treatment of enlarged tonsils which put me in mind of a case which I had treated some time ago. I was called to see a little girl, about 6 years old, who had both tonsils enormously enlarged, so much so that she could hardly breathe, and was becoming pigeon-breasted.

My *modus operandi* was as follows: I took a stick of caustic potash, rolled it in paper, leaving one end bare, placed the bare end on about the middle of the tonsil, held it there about two seconds, withdrew it, waited about a minute, then had her rinse her mouth with vinegar. Repeated treatment twice per week until they were reduced to normal size, being careful to apply in same place each time. I made in all twenty-three applications, treating but one tonsil at a sitting.

I treated her three years ago, and her tonsils have been all right since. GEO. G. SABIN, M.D.

CHOLERA PREVENTION.

NASHVILLE, August 10, 1883.

EDITOR JOURNAL OF AMERICAN MEDICAL ASSOCIATION,

My Dear Doctor: THE JOURNAL of July 28 has an excellent letter on cholera from Dr. H. Raymond Rogers, of Dunkirk, N. Y.; but I beg leave to insist on it that such expressions as the following should be omitted from cholera articles: "We know this disease laughs at cordon sanitaire or quarantine."

Now, it is time the profession had gotten over such free and easy statements. His excellent ideas on the pathology and treatment of cholera are marred by such a statement.

Cholera is, in a broad sense, a contagious and infectious disease, and the world should be taught to admit it, and act accordingly. It is communicable by persons, by traps of all kinds, by water, through the mails, and perhaps through the air for short distances. It is useless to cite authorities to prove this; it is one of those well established facts that no unprejudiced person can doubt, if he will read a part of or all the mass of evidence in any library in the land.

I will not go into details, but I insist that no such

general statements should be used at this time, as public confidence is thereby destroyed in all preventative measures. It may be true that fresh dejections or personal contact will not produce choiera, but this refinement of argument should be entered into if anything at all is said about it.

The fearful difficulties sanitarians meet with are increased tenfold by such statements, made thoughtlessly at the beginning of, or just before, an epidemic invasion. They are treasured up by bigots, and the explanation in extenso not being at hand, they are used with great force by those self-taught and ignorant meddlers we find in every community. Only last evening I was present at a medical society meeting, where a prominent physician started out by saying he did not regard the disease as contagious or infectious, or communicable, in an accnrate sense; yet in the course of his remarks he dwelt on the great value of quarantine and prophylaxis, and referred to it as a germ disease, due io a cryptogamic poison, etc. What did the reporters do? Why, of course they seized on the first remark, and heralded it to the world in the morning paper that Dr. So-and-so said cholera was not contagious or infectious, and therefore not communicable, not a word being said in regard to the other remarks.

What I insist on is that the doctors sometimes talk too much with the mouth, and are not particular enough in our applications, and we thus destroy public confidence.

Please tell Dr. Rogers about this, as well as your other correspondents. I believe you are going to have a splendid journal, if you do not let in too much Massachusetts politics, and code and advertisement wrangling. The JOURNAL will be a credit to the profession and to the American Medical Association, but it cannot afford to be partisan or one-sided. Very respectfully, C. C. FITE.

SOCIETY PROCEEDINGS.

REPORT OF THE PROCEEDINGS OF THE AMERICAN SOCIETY OF MICROSCOPISTS.

[Continued from No. 5.]

Thursday morning Dr. A. M. Bleilie, of Columbus, Ohio, read the following paper, entitled "The Effects of the Division of the Vagi on the Muscles of the Heart."

Some of the gentlemen present may remember that at the meeting held last year I presented a paper having for its object the demonstration of nutritive or trophic nerves for the heart. The procedure adopted was as follows: One or both vagi were divided in the neck, and after a certain time the heart was examined. In all cases was found a fatty degeneration of the heart, much sooner when after division of both nerves than if one nerve had been practiced on and better marked the more the time had elapsed between operation and death. These results were all obtained on the rabbit. The Society requested that this investigation be pursued further and a report be made at this meeting. Various causes have since prevented our carrying out the work as thoroughly and systematically as we could have wished. Chief among these was our inability to procure more than a few rabbits. We finally concluded to use pigeons, and even here we had some difficulty in procuring a large stock of animals and a regular supply. The procedure with pigeons was the same as that followed in the rabbit, one or double-sided vagotomy, and where animals did not die from changes superinduced by the operation, death was caused by decapitation or nicotine. A small part of each heart was examined fresh, and the other portion divided into two parts. One was immersed in alcohol, the other in diluted chromic acid. We found that light staining facilitates examination, and of late have almost exclusively used a very diluted eosine solution, the preparation being immersed in this for one or two minutes just before tearing. The granules themselves are not stained by this agent, but the slight tinging of the basis substance was found to be quite a relief in protracted observation. Tearing the pigeon heart is a much more tedious process than with the rabbit heart, nor can such satisfactory preparations be obtained, owing to the extreme delicacy of the fibers in the former. In preparing specimens of the normal heart for a standard, it was soon found that young pigeons were entirely useless for this work, as in them the muscular fibers are all finely granular, the cross-striæ being only indicated by a row of granules. This we verified with many hearts. Pigeons which have undergone double vagotomy die in from ten to thirteen days. Immediately after the operation they are profoundly affected; recover somewhat after a few days, though never fully, and death comes on suddenly without any noticeable signs. At the autopsy the crop is usually found filled with corn and a whitish, fetid fluid, but the direct cause of death is not apparent. In animals which have undergone a one-sided vagotomy only, everything appears to have passed off in a few hours, the pigeon appearing just as one uninjured, nor is there any microscopic change after death.

As a result of our work I would name the following points:

1. The fibers of the pigeon are more delicate and more friable than in the rabbit.

2. In young pigeons the cross-striation of the muscular fibers of the heart is indicated by the fine granules which might be mistaken for beginning degeneration.

3. Even in the adult pigeon granular fibers are occasionally found by the side of well-marked striated ones, the former being perceptibly narrower. Possibly the granular fibers are still embryonic, and destined to replace the older ones as needed.

4. Recently Pohl Rincus has pointed out that the frog's heart has two sets of muscles—the outer one termed the mouth, and the other forming by its arrangment into trabeculæ a system of lacunæ in which the blood circulates. In our pigeon heart preparations blood corpuscles seem to lie in interstices, possibly corresponding to the lacunæ of the frog's heart, and these corpuscles, when altered by reagents, might be mistaken for larger fat granules.

5. After division of one vagus only there follows

in the heart muscle of the pigeon a finely fatty degeneration, about equally marked on both sides of the heart, and more plain the longer the animal has been kept alive after the vagotomy.

6. After double vagotomy the degeneration is better marked—*i. e.*, the fat granules are large and appear sooner than after one-sided vagotomy. Hence we conclude that the vagus in the pigeon, as in the rabbit, carries trophic cardiac fibers, no other explanation accounting for the changes found, and that the influences descending by one nerve are sufficient to somewhat retard the degeneration on both sides which would follow a double division.

Dr. T. S. Updegraff, of Elmira, N. Y., followed with a paper on

HITHERTO UNDESCRIBED ANIMALCULÆ.

The value of this gentleman's observations cannot be considered great, since Prof. Kellicott at once showed that a form described as a new nais is the larva of a well known insect.

Dr. Christopher Johnson, of Baltimore, Md., gave a verbal description of a

NEW POLARIZING CRYSTAL,

which he calls the ethyl ether of gallic acid.

A paper entitled

NOTES ON NEOPLASM,

by Dr. W. A. Birchmore, of Kansas, was read by title, and also another by the same author on

EMBOLISM IN PIGS.

A letter from the Rev. Francis Wolle, of Bethlehem, Pa., announced that his work on the "Desmids of the United States" is nearly completed.

Thursday afternoon, Prof. G. E. Blackman, of Dunkirk, N. Y., read a paper on

THE RELATION OF APERTURE TO AMPLIFICATION IN THE SELECTION OF A SERIES OF MICROSCOPIC OBJECTIVES.

In the selection of a microscopical armamentarium the problem for the ordinary worker is to provide an outfit which shall enable him to see clearly all the details, which, invisible to the unaided eye, are yet visible by the aid of the microscope. To accomplish this amplification alone is not sufficient, resolving power is also required. This depends on angular aperture, but, as the relation is not a simple one, Prof. Abbe, of Jena, has introduced the term numerical aperture which applies to all lenses dry and immersion, and expresses a simple and constant relation to the important property of aperture resolving power. The numerical aperture is easily found by multiplying the refractive index of the medium in which the angle of aperture is measured by the sine of one-half that angle. Now if the numerical aperture of any objective is multiplied by 96,400 we get the average resolving power of that objective.

With these data we can choose a series of objectives and eye-pieces which will answer all purposes. The choice is guided by the practical rule that no more amplification or aperture should be used than is required. The starting point is the fact that lines 100 to the inch can easily be resolved by the unaided eye. It is assumed that the objectives are of the highest grade of workmanship, and the length of the tube from the front surface of the objective to the diaphragm of the eye-piece ten inches. The eye-pieces should be six in number, viz: 2-inch, 1-inch, ¾-inch, ½-inch, ⅓-inch and ¼-inch. The objectives required are the following: One 4-inch of .10 N. A., having an amplifying power of 12½ with a 2-inch eye-piece and a resolving power of 500 lines to the inch; one 1-inch of .26 N. A., having an amplifying power up to 200 with a ½-inch eye-piece, and a resolving power to 20,000; one ⅙-inch, dry working, cover correcting objective of .94 N. A., having an amplifying power to 1,200 with ½-inch eye-piece, and a resolving power to 90,000; one ⅛-inch homogeneous immersion objective of 1.42 N. A., with amplifying power to 1,600 with ½-inch eye-piece, and resolving power to 13,000.

It is evident, therefore, that a ⅙-inch or a ⅛-inch objective will show all that can be seen with a 1-50, while the advantages of the lower power are very great.

In the discussion, Prof. Rogers questioned whether we can compute resolving power, and gave reasons for doubting that this simple formula of Abbe's tells the truth.

After this discussion, there were presented by far the most important papers of the session, namely, the reports on the standard centimeter, one by Prof. Rogers, and the other by Dr. Curtis, Secretary of the National Committee on Micrometry.

Prof. Hilgard, Superintendent of the United States Coast Survey and Director of the Bureau of Weights and Measures, presented to the National Committee the centimeter scale 1882, A, which is carefully ruled on a platinum iridium surface. This scale is divided into ten millimeters, each division being marked by three lines, distant from one another ten mickrons. The first millimeter is again divided in the same manner into tenths of millimeters. The first tenth of a millimeter is subdivided into ten spaces of ten mickrons each. The report of the committee gives the corrections to the different divisions of the scale. None of these are as great as one mickron. Prof. Rogers determined the coefficient of expansion of the platinum-iridium plate, and compared centimeter A with other standards whose corrections had been previously ascertained. Assuming that 2 M. is the limit of precision in microscopic measurement, the observations of Prof. Rogers show that the centimeter A is 1-100 part of the metre des archives at 60° F., and that the second millimeter of the scale is 1-1000 part of the metre des archives at the same temperature.

It thus appearing that this centimeter has every essential of a standard of measurement, the Committee presented it to the Society and recommended that it be adopted as the basis for future studies and discussions in micrometry.

The report of the Committee was adopted by the Society with thanks to Prof. Rogers and to the Committee. The bar was ordered to be placed in charge of the custodian, subject to removal only by the order of the Secretary, countersigned by the President. A committee consisting of Prof. McCalla, Dr. Leste

Curtis and Dr. Geo. Fell, was appointed to take copies of the bar for such societies as may desire them.

The importance of this action of the Society will be appreciated when we consider that it will probably determine the standard of microscopic measurement, not only for this country, but also, for England and the rest of Europe. As is well known, the world has never agreed upon a general standard.

The micrometers of different makers are correct neither in regard to the total length of the unit employed nor in respect to the subdivisions of that unit. Until by very great labor and expense, Prof Rogers obtained accurate copies of the meter and yard, and compared these so carefully with centimeter A, there was not in the world an exact unit of microscopic measurement.

The number of accurate observations on this bar, together with its adoption by the microscopists of the United States, constitute an important argument for its adoption by the world.

In the discussion following this report, Prof. Rogers made the interesting statement that according to his comparison of the yard and meter, the value of the latter is 39.37030 inches, while the generally received value is 39.37079 inches.

Thursday evening the Society held a conversazione at the Calumet Club House. About 300 microscopes were exhibited, and many interesting slides.

Friday morning the following officers were elected for the year 1883–4: President, Hon. J. D. Cox, F.R.M.S., of Cincinnati; Vice Presidents, Prof. T. J. Burrell, of Champaign, Illinois, and Prof. W. A. Rogers, F.R.M.S., of Harvard University; Executive Committee, Prof. A. H. Chester. of Clinton, New York, Dr. H. A. Johnson, of Chicago, and Gen. Wm. Humphrey, of Jackson, Michigan. It was decided to hold the next meeting at Rochester, New York.

Dr. W. T. Belfield exhibited some photographs of crystals of pure and adulterated lard and tallow.

Dr. D. S. Clevenger, of Chicago, gave a short paper on "The Microscope in the Physiology and Pathology of the Brain."

Dr. Thomas Taylor, of Washington, presented a paper on "Internal Parasites in Fowls." He had examined several fowls which had died of an unknown disease, and found a number of parasites, some of them new, in the lungs, the cellular tissue, and the intestinal canal. These studies suggest the conclusion that many of the diseases of the domestic fowl, not referable to any known type, may be due to the presence of parasites.

A paper by Dr. Holbrook, of New York, on the "Termination of the Nerves in the Kidneys," was next read. The nerves were traced by the use of chloride of gold as a staining agent. This substance has the property of staining the nerves dark violet, more intensely than it stains other kinds of matter, while formic acid removes the stain less readily from the nerves.

The fresh kidneys, as well as those preserved in chromic acid solutions, were frozen in a freezing microtone, and the cut sections were placed in a ½-per cent. solution of chloride of gold, where they remained from forty minutes to several days. Then they were washed and left in a 25-per cent. solution of formic acid from a few hours to days. The results obtained are thus given:

The nerves supplying the kidneys are mainly of the non-medullated variety. They accompany the larger arteries of this organ, either in bundles or in flat, expanded layers, and the latter features I found more common than the former.

Sometimes an artery would be found encircled by a network of non-medullated nerves of a bewildering number. Hundreds of such nucleated bundles of fibers could be traced around, above, and below an artery, freely branching, bifurcating, and supplying all the neighboring formations with a large number of delicate fibrillæ. In such a case the single non-medullated nerve fibers lay apart and were separated by an extremely delicate layer of fibrous tissue, the perineurium internum. The corticle substance undoubtedly derives all of its nerves from such bundles accompanying arteries. The pyramidal substance is supplied with bundles of non-medullated nerves, apparently independent of the arteries; at all events such formations are exceedingly scanty here. The bundles of non-medullated nerve fibers are marked by a large number of nuclei. True ganglions I have seen only in small numbers. The bundles of nerve fibers give off delicate ramules to the afferent vessels by which they enter the tuft, and here they produce a delicate plexus spun around its capillaries. It was impossible to decide where the ultimate fibrillæ branch in the capillaries of the tuft, because in the specimens treated with formic acid it was impossible to distinguish between the flat epithelia covering the convolutions of the capillaries and the endothelia covering their interior. Sometimes I obtained a specimen in which it seemed as if the ultimate fibrillæ branched beneath the covering flat epithelia in the delicate connective tissue between the convolutions of the capiliaries, but of this I am not certain. I wish here to corroborate the assertion of L. Bremer, that every capillary is supplied with a plexus of non-medullated nerve fibrillæ, but I disagree with his assertions, that the nerves run outside the wall of the vessel and do not penetrate the wall itself. My own observations, I think, leave little doubt that they penetrate the cement substance between the endothelia. Concerning the distribution of the nerves in the middle coat of the arteries, I fully agree with the assertions of M. Lowitt that they run between the smooth muscle fibers. From the large bundles of non-medullated nerve fibers innumerable delicate beaded fibrillæ arise, and course in the delicate fibrous connective tissue between the uriniferous tubules. In perfect specimens there is no difficulty in satisfying one's self of the fact that every tubule is encircled by a plexus of non-medullated nerve fibers coursing either in the immediate vicinity of the tubule, in the interstitial connective tissue, or within the dense layer subjacent to the epithelia, known as *membrana propria*, or even within the layer, along the feet of the epithelia themselves. Obviously those nerves are most favorable for research which course outside of the epithelia, at a

small distance from the membrana propria. Here we can, sometimes, see at certain regular intervals, arising at right or acute angles, extremely delicate nerve fibrillæ, which pierce the membrana propria and run into the cement substance between the epithelia. The distance in which these ultimate fibrillæ arise fully correspond to the breadth of a single epithelial element, so much so that in some places the impression of the ladder with regular rounds is obtained. Of course, only one of the frames or side pieces of the ladder is seen. In a front view of the epithelia the nerve-fibrillæ can sometimes be traced in the form of a delicate plexus distributed in the epithelia, and not infrequently conveying the impression that every epithelium is surrounded by a nerve-fibril in the cement substance. In an edge view this impression is not obtained, for we can see the interstices between the epithelia supplied with nerves only exceptionally, while in the majority of cases two or three epithelia seem to be supplied with only one nerve fibril common to them. The latter image is more particularly pronounced along the straight collecting tubules in which, usually in edge view, two nerve fibrillæ are situated between three or four epithelial elements, and here the cement substance, carrying the nerve fibrillæ, as much broader than the cement substance apparently destitute of nerve fibers. If, however, we recall the fact that in a front view of the tubules the arrangement of the ultimate fibrillæ is plexiform, we obviously should not expect to see in edge view nerve-fibrillæ between each single epithelium. The distributions of the nerves in the uriniferous tubules seem to be richer in the convoluted and the ascending and descending limbs of the narrow tubules, while the straight collecting ones seem to be more scantily supplied. Several times I have seen nerve fibers accompanying the loops of the narrow tubules in a direction corresponding to their course. Recent researches made by S. Stricker make it evident that the cement substance between the epithelia is by no means an invariable formation, and that temporarily the ledges of the cement substance may be distinctly seen; at other times, on the contrary, be lacking to such an extent that the epithelia represent one unbroken layer of protoplasm with nuclei at regular intervals. Even when the cement substance is apparent, invariably transverse spokes (the formerly so-called thorns) are seen traversing the layers of cement substance interconnecting the single epithelia. It is these spokes with which the nerve-fibrillæ inosculate. Thus we easily understand the way in which nervous impulse is transmitted into the interior of the small secretory work-shops, termed epithelia. Dr. Beale claims to have traced the nerves of the kidney to their distribution around the vessels and uriniferous tubules, but makes no mention of their final endings. The low power used by him leads me to think that he may have mistaken connecting tissue-fibers for nerves. I have searched the records of microscopic research carefully since 1870, and find no special mention of discoveries in the terminations of the nerves in any glandular organ.

The last paper of the morning session was by Dr. Hudson, on Torula.

Friday afternoon Prof. Eastman, of Baltimore, gave a verbal description of the Eggs of the Tricocephalus Affinis in the Liver of the Rabbit.

Prof. Killicott presented two interesting papers, one on Cathurnia data, and another on Parasites of the Cray-fish.

Prof. Mansfield, of Greencastle, Ind., read a paper on Division of Labor among Microscopists.

A paper by Dr. Lester Curtis on Observations on Undescribed Vessels of the Spinal Cord of the Cat gave the results of a new method of staining.

After the reading of the papers the President elect was conducted to the chair, when he made a brief speech and then declared the meeting adjourned.

REPORT OF THE SECRETARY OF THE SECTION ON SURGERY AND ANATOMY OF THE AMERICAN MEDICAL ASSOCIATION, AT THE MEETING IN CLEVELAND, JUNE, 1883.

CASE HALL, June 5, 1883.

SECTION ON SURGERY AND ANATOMY.—Meeting called together at 2:30 P. M., by the Chairman, W. F. Peck, M.D.

Dr. A. F. Holt's being the first paper on the programme he was called upon to read the same, but asked that his paper be postponed until late in the afternoon, as he wished to display illustrations by the magic lantern. Granted.

Dr. R. A. Vance was called upon and read a paper on Radical Cure of Hernia, by a new method. A motion was made that the paper be referred to a committee appointed by the Chairman.

Dr. D. P. Allen read a paper next on "Comparison of Antiseptic and non Antiseptic Method of Treatment." Discussions upon this subject were made by Drs. Murdock, Penn; Martin, Mass.; Hankin, Penn; Quimsby, New Jersey; McClurg, Penn; Dr. Gazalon, Maine, and Watson, New Jersey. A motion to lay this discussion upon the table was made by Dr. Murphy and carried.

By special request Dr. S. D. Gross, of Philadelphia, then read a paper upon the "Value of Early and Late Operation in Morbid Growth, Especially Malignant." A resolution was made by Dr. Gazalon to request Dr. Gross to present his paper for publication, but the doctor declined upon the condition, that the paper was the property of the Surgical Association.

Dr. H. A. Martin followed with a paper on "Treatment of Synovial Disease by a New Method." The rubber bandage was then displayed as his new method of treatment. A motion to refer Dr. Martin's paper to a committee for publication, carried.

Dr. Murphy made a motion that the Section should appoint a special time for the purpose of Dr. J. R. Taylor of New York, and the motion being carried, the Chairman appointed 2 P. M., on June 6th, as the special time, half an hour before the regular session.

A motion to adjourn being in order, it was moved and carried.

SECOND DAY, JUNE 5, 1883.

SECTION ON SURGERY AND ANATOMY, Case Hall.—Meeting called to order by the Chairman, W. F. Peck, at 2 P. M. Regular meeting would have taken

place at 2:30 P. M. Extra session of half hour for the benefit of Dr. Taylor, to read a paper on "Fractures of the Long Bones." Dr. Taylor not being present, Dr. Robert Newman, of New York, was called upon and read a paper on the "Surgical Use of Electrolysis." Especial attention was given to its practicability in the treatment of stricture of the urethra.

Dr. W. F. Peck, Chairman, appointed a committee consisting of Dr. McMurty, of Kentucky; Dr. Moore, of New York, and Dr. Park, of Illinois, to meet with the Secretary for examination of papers.

Dr. J. R. Taylor, of New York, read a paper, by request, on "Fracture of the Long Bones." The doctor displayed his apparatus for fracture of the femur.

Dr. Donald Mc Maclean, of Michigan, not being present, and being first upon the list for Wednesday evening, Dr. Marcy was called upon and read a paper on the "Comparative Value of Antsieptics." A motion to receive and refer the paper to the committee for publication, carried.

Dr. Lewis Hall Sayre, New York, followed with a paper on "Amputation Below the Knee-Joint in Preference to Bresement Force or Resection in Certain Cases of Deformity with Anchylosis;" illustrated by two cases. Motion to receive and refer to committee, carried.

As Dr. J. H. Packard, of Pennsylvania, was not present at the Association, and having sent his paper on "Report of a Case of Re-Amputation at the Hip-Joint; Secondary Hæmorrhage on Sixth Day; Ligature of the Primitiva Iliac Artery," a motion to refer paper to committee, carried.

Dr. E. M. Moore, of New York, read a paper giving the details of a case in which 1¼ inches of the shaft of the ulna were resected. To overcome deformity resulting from fracture of the radius, the ends of the bone were wired together, securing perfect union without deformity.

Dr. Wile, of Courtlandt, N. Y., corroborated and sustained the conclusions of Dr. Moore's paper. Re-fracture of the bone when badly united is proper.

Dr. S. M. Ross, of Altoona, Pa., related a case of fracture of lower end of radius, where the ulna could not be retained in position.

Dr. H. O. Marcy, of Massachusetts, related a case of luxation of ulna seven weeks after fracture of radius, reduced after Dr. Moore's method.

Dr. Quimby, of J. C., asked what was the extent of time at which re-fracture was permissible. Dr. Moore stated that after six months if he did not get good results.

Dr. Kinloch, of South Carolina, asked if the same result could not be attained by resecting the ulna above the articulation.

Dr. V. H. Coffman, of Nebraska, read a paper on the "Treatment of Tender Spines by Incision," which was discussed by Drs. Moore, Quimby, Campbell, Watson, and Steele of Illinois. The discussion was closed by the author.

CASE HALL, June 7, 1883.

First, by request, Dr. Alfred F. Holt, of Massachusetts, showed at the Opera House some illustrations of anatomical and pathological specimens.

Section was called to order by Chairman W. F. Peck.

Dr. W. A. Byrd read a paper on "Excision of Both Hip Joints." Dr. Verety, of Chicago, exhibited splint and apparatus which were used by Dr. Byrd, after excision. Motion to refer paper to committee for publication, carried. Remarks were made by Drs. Sayre, of New York, Garcelon, of Maine, and Gunn, of Chicago.

A paper on "Surgical Treatment of Intestinal Obstruction" was then read by Dr. Henry O. Marcy. Motion to refer to committee for publication. The paper was discussed by Drs. Watson, of New Jersey, Gordon, of Maine, and Byrd, of Illinois.

Dr. Gordon said he believed that carbolic acid would be excluded from antiseptic use; which was discussed by Dr. Murdock, of Pennsylvania; Dr. Keller, of Arkansas, and Dr. Moore, of New York.

Dr. Prewett, of Missouri, read a paper on "A New Operation for Case of Ranula." Referred to Committee.

Dr. Jos. Raurohoff, of Ohio, next read a paper on "Early Use of Trephine." Referred. Discussed by Drs. Gunn, of Illinois, and Hyde, of New York.

Dr. R. B. Bentley, of New York, followed with a paper on "The Treatment of Cystitis by External Urethral Section." Discussed by Dr. Murdock, of Pennsylvania, and referred to Committee of Publication.

Dr. R. B. Bontecou, of New York, reported on "Treatment of Cystitis by External Urethral Section." Moved and carried that the Doctor be requested to prepare a paper on the subject, to be published in THE JOURNAL.

Dr. Joseph H. Warren, of Massachusetts, read a paper on "Tissue Repair, or Pathology of Subcutaneous Injection in the Cure of Hernia." Discussed by Dr. Hally, of Missouri; Dr. Philips, of Ohio; Dr. Reynolds, of Michigan; Dr. Thorn, of Ohio, and referred for publication.

Dr. Verity, to write a paper on "Derrick and Improved Apparatus for Suspension in Application of Plaster Casts, etc.;" also on a "Universal Suspension Splint.

The following dispatch was received from Prof. W. W. Dawson, of Cincinnati:

"PROF. W. F. PECK, *Chairman Section on Surgery American Medical Association*, Cleveland, Ohio:—Sorry that I cannot meet with the Surgical Section. Convey my kindest wishes to the Fellows, and my earnest wish that our department may this year be well sustained. W. W. DAWSON."

Received, and the following ordered by the Section to be telegraphed in reply:

"PROF. W. W. DAWSON, Cincinnati, Ohio: The Section sends Prof. Dawson its sincere regret for not having had his presence and counsel."

Adjourned *sine die*.

BOOKS AND PAMPHLETS RECEIVED.

Transactions of the College of Physicians. Third Series; Vol. VI.

Development of Cancer from Non-Malignant Diseases. By Daniel Lewis, M.D.

The Opium Habit: Its Successful Treatment by Avina Sativa. By E. H. M. Sell, A.M., M.D.

Usual exchanges.

MEDICAL SOCIETY ITEMS.

NORTHWESTERN INTER-STATE MEDICAL SOCIETY.

About one year since a society was formed in Hudson, Wisconsin, by a good delegation of physicians and surgeons from both Minnesota and Wisconsin. The soiety was christened "The Northwestern Inter-State Medical Society," and embraced twelve counties lying on either side of the State line from Lake Pepin to Lake Superior.

It meets every four months somewhere in the district, but its regular annual meeting is always in Hudson, on the first Tuesday in August. It starts out on its second year with its membership greatly augmented, and bids fair to be the source of both pleasure and instruction to its members.

The next meeting will be held in Eau Clare on the first Tuesday in December. The society is thoroughly orthodox, and cordially invites membership.

NECROLOGICAL.

Burnham, Walter, M.D., was born at Brookfield, Vt., Jan. 15, 1828, and was the son of Dr. Walter Burnham, a distinguished physician of that town, died at his residence in Lowell, Mass., Jan. 16, 1883, of gastritis.

When returning from a professional visit to New York, in Jan., 1880, he received so severe an injury of the left elbow, by a fall at Elmira, as to necessitate an amputation of the arm in the following year. From this time his health gradually failed, though his mental faculties seemed but little impaired even to the time of his death, at the age of 75.

Dr. Burnham graduated from the University of Vermont in 1829, and commenced the practice of his profession in Guildhall, Vt. Thence he removed to Barre, aud in 1846 came to Lowell, where he soon became engaged in a large practice, mainly surgical.

By the citizens of Lowell he was often called upon to fill public positions of trust and responsibility. Among them were two terms of service as a representative to the General Court of the State. While a member of the Legislature he presented to that body a bill known as "The Anatomy Act," which provided for the use of certain material by the medical schools of the State, and by physicians, for the purposes of dissection.

Mainly through his efforts this bill was passed, and with few, if any, modifications, is now a statute law of Massachusetts.

He thus rendered to the advancement of medical science a great and lasting service.

Although he enjoyed a wide reputation as a general surgeon of great ability, yet he was known to the profession at large especially as an ovariotomist. He made his first ovarian operation in 1851, at a time when the almost universal sentiment of the medical world was opposed to ovariotomy, and when Atlee, of Pennsylvania, was perhaps the only American who advised and performed the operation.

His first case was successful, and others followed in rapid succession, until in 1881 his whole number of cases was about two hundred and fifty, of which more than seventy-five per cent. had recovered.

In New England, at least, the change of sentiment regarding ovariotomy was largely due to the work and teaching of Dr. Burnham.

To him is due, also, the credit of having been the first to successfully remove the uterus and its appendages by abdominal section. This operation was performed in June, 1853.

While great respect and honor was accorded to Dr. Burnham by his professional confreres as one of the pioneers in the advancement of abdominal surgery, still, from his patients and others with whom he came in contact, he was the recipient of a measure of good will and affection larger than is often accorded to members even of our profession.

To young practitioners just entering upon the struggles of their professional life, Dr. Burnham always extended a helping hand. In all their difficulties and discouragements an appeal to him was answered with reassuring words and generous acts.

Whenever he had occasion to give them instruction or correct their errors he did it with wonderful gentleness and patience.

To-day many surgeons in successful practice remember with deep gratitude their indebtedness to Dr. Burnham.

John C. Irish, M.D.

Mason, Augustus, M.D., died at his residence, in Brighton, May 24. He was born in Waltham, Mass., Oct. 21, 1822, was graduated from Brown University in the class of 1841, studied medicine at Harvard University, taking his degree in 1844. He continued his medical studies in Paris until 1847, when he commenced the practice of his profession in Lowell, and removed to Brighton about 1855. He was eminently successful in his calling, holding for many years a leading position as a practitioner in this large suburban town. He was commissioned as Assistant Surgeon of the 43d Reg. Mass. Vol., and was stationed in Newbern, N. C., where he served until the spring of 1863, when, owing to the illness of Mrs. Mason, he resigned his commission and returned home. In 1873, he relinquished his practice and went to Santa Barbara, Cal., for the benefit of his invalid wife. Here he remained till 1877, when he returned to Brighton and resumed his work. He was a member of the American Medical Association, and of several of the local societies. He was a delegate to the International Medical Congress, held in

London last year. He frequently contributed to the literature of his profession, and is best known for his studies upon the climatology of Southern California.

He was esteemed and beloved in Brighton, not only for his ability, but as a public-spirited citizen, prompt in furthering every local interest, and he was exceeded by few in the real service rendered his town. He was active in the redemption of Brighton from the long continued detriment sustained on account of the many private slaughteries, and in the establishment of the abattoir, which at once added materially to the intrinsic value of property. Thus was removed an important cause of the ever widening contamination of air, water and soil. He held large properties, which he had done much to develop, and, at the time of his death, was actively engaged in plans for furnishing better metropolitan steam railroad facilities. He had been but a few days sick, and his death was sudden and unexpected.

H. O. MARCY, M.D., of Mass.

MORRISON, JAMES, A.M., M.D., was born in Peterborough, N. H., June 20, 1818, and died in Quincy, Mass., May 20, 1882. He graduated at Harvard University, in 1844, and studied medicine at the University of Maryland, from which he received his medical degree in 1846. For a number of years he was the resident physician at the Baltimore Infirmary. About 1850 he moved to San Francisco, Cal. He assisted in the organization of the first medical school on the Pacific, and was Professor of Theory and Practice and Pathological Anatomy. He taught for about five years. For two years he was a student of medicine in Europe, devoting most of his time to study in Paris. He was a trustee of the University of the Pacific. His practice was large, and he was an active worker in the advancement of the standard of medicine in California, and at one time the Vice-President of the State Society. Ill-health and his love for New England caused his return to Massachusetts. For the last twelve years he had been able to continue the practice of his profession, and had contributed occasional articles to various medical journals. At the time of his death he was President of the Norfolk District Medical Society.

H. O. MARCY, M.D., of Mass.

ASHFORD, FRANCIS ASBURY, M.D., of Washington, D. C., was born in Fairfax county, Va., September 18, 1841; died at his residence, in Washington City, May 19, 1882. He was educated at the Academy in Alexandria, Va. The breaking out of the war between the States interrupted his academic course, as he joined the Southern army and served to the close of the war. His medical studies were begun immediately after the armies were disbanded, and pursued under the supervision of Dr. Thomas Miller, of Washington, between whom and his pupil there was established a firm and lasting friendship, which lasted through the life of each. Attending lectures at the medical department of Columbia College, from which he graduated M.D. in 1867, he was for one year resident student in Columbia Hospital, and four years Assistant Physician under Dr. J. Harry Thompson. He subsequently became Assistant, and, after his own practice became large, he gave up that position for Consulting Surgeon, and was a member of the Board of Directors, which position he retained to the time of his death. He was physician in charge of diseases of women in Columbia Hospital Dispensary. In 1876 he was elected Professor of Surgery in the Medical Department of the University of Georgetown College, and also Dean of the Faculty, a position which he filled with ability and great acceptableness to the Faculty and to the students. He was one of the originators and founders of the Children's Hospital, which has grown to be one of the very best institutions of its kind in the country. He has served creditably as Surgeon to the Hospital, and has endeared himself to all connected with this charity. For two years he has been connected with the Faculty of the Training School for Nurses, where he exhibited his usual ability. Dr. Ashford early connected himself with the medical organizations, and was one of the originators of the Clinical Pathological Society, which for a few years was a very active and profitable association to its members. In the Medical Association, the chartered organization, he has been a very active and useful member, and was its President last year. He was also a member of the Medical Association of the district and of the Gynæcological Society of Washington. Dr. Ashford has contributed some exceedingly useful papers to the medical journals. For the last six or eight years his practice has been large and laborious, and doubtless had something to do with his failing health. The medical organizations with which he was connected met in special sessions, and passed resolutions of respect for his memory and of condolence with his family. He leaves a wife and five children.

BACHE, BENJAMIN FRANKLIN, Medical Director, U. S. N., was born at Monticello, Va., February 7, 1801; died November 2, 1881. He was a great grandson of Benjamin Franklin. Graduated from the College of New Jersey, at Princeton, in 1819, and from the Medical Department of the University of Pennsylvania in 1823. He was for several years, while on furlough from the Navy Department, Professor of the Natural Sciences at Kenyon College, Ohio.

Dr. Bache was a man of profound learning in his profession, and of great and varied general information. He was an omniverous reader, and had the advantage of a remarkably retentive memory. He established the Naval Laboratory on the principle of of a guarantee of purity of medicinal preparations to be used in the naval service, and carried on its work for many years. As an expert in crude drugs he had acquired a remarkable degree of skill.

Dr. Bache was the first (within the knowledge of the writer) to apply the principle of disenfection by means of heat, to a ship, having early in his career been successful in ridding a ship in which he was serving, of a severe epidemic of yellow fever by that means.

E. S. B.

Forwarded by J. N. Gunnell, U. S. N.

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ORIGINAL ARTICLES.

SIMULTANEOUS TRAUMATIVE DISLOCATION OF BOTH HIP JOINTS.

BY JOHN H. PACKARD, M.D., OF PHILADELPHIA.

[Read before the Section on Surgery and Anatomy, June, 1883.]

Simultaneous luxation of both femora is an accident of very rare occurrence. It is not mentioned at all by Malgaigne, and Hamilton barely refers to it. Among systematic writers on general surgery, Erickson merely states that it has been recorded in some instances, while Gibson[1] says "an interesting case of the kind was reported two or three years ago in one of the European journals." Gross says that three cases are recorded.

My attention was attracted to the subject by a case which occurred during my service at the Episcopal Hospital, in 1879, and I have succeeded in collecting twelve others. Even this small number present certain features which seem to me to warrant me in placing them together, for the purpose of drawing some inferences in regard to the mechanism of their production, and the occasional difficulties in diagnosis which they may present.

These thirteen cases admit of division into three classes. In the first, which embraces eight out of the whole list, are those in which the head of one femur has slipped out behind the socket, so as to lie upon the dorsum ilii, or the ischium, while the other has been dislodged forward, so as to rest either on the thyroid foramen or the pubis.

The second class includes three cases, in which both femora have been luxated backwards.

Of the third class there are but two instances, the heads of the bones resting on the thyroid foramina.

CASE I.—Boisnot (*American Journal of the Medical Sciences*, October, 1867, p. 396). The patient, a robust man, æt. 40, was standing on the sidewalk awaiting the descent of a bundle of wool weighing over 100 pounds from the fourth story of a factory. He had both hands raised, his left foot somewhat advanced, and the right placed back a little and turned outward. As he stood thus the bundle became detached and fell the whole distance, striking him on the head and knocking him down on his right side.

The left femur was at once seen to be luxated on the dorsum ilii, and reduced by Reid's method, when, from the difficulty of bringing the legs together, it was noticed that the head of the right femur was on the pubis. Under chloroform, this dislocation was then reduced, also by manipulation. Perfect recovery had taken place by the twenty-eighth day.

CASE II.—Hodgen (*American Journal of the Medical Sciences*, July, 1855, p. 280. *St. Louis Medical and Surgical Journal*, January, 1855). This patient was trying to stop a pair of runaway horses, and was knocked down, the wheel passing over the sacrum, and crushing him to the ground. On examination, the left femur was found to be misplaced, its head resting probably on the spine of the ischium; the left was opposite the thyroid foramen, but not forced into it. Both luxations were reduced under ether, by extension and counter-extension. The patient was well so as to walk without assistance in two months and a half, but there was some difference in the length of the lower limbs, attributed to injury of the pelvis.

CASE III.—J. M. Warren (*American Journal of the Medical Sciences*, April, 1858, p. 563. *Boston Medical and Surgical Journal*, January 14, 1858). In this case the patient was crushed under a falling house, being struck in the back as he was endeavoring to escape. The right thigh was found to be luxated, the head of the bone being in the thyroid foramen. Reduction was effected by means of pulleys. The left limb was next examined, and presented all the signs of dislocation upon the dorsum ilii; slight crepitus was also perceived. Extension being made, the head of the femur went into its place, but at the same moment a crack was heard, and it soon became evident that fracture had taken place.

In spite of an attack of congestion of the lungs, there having been also fracture of one or two ribs, the patient went out of the hospital well at the end of two months.

CASE IV.—Mr. Pollard (St. Bartholomew's Hospital Reports, vol. viii., 1872). A man æt. 53 was stooping down, when a mass of earth fell upon his back, forcing him forward and burying him.

The left hip was found to be dislocated, the head of the femur on the dorsum ilii, the right with the head in the thyroid foramen. Under chloroform the former was reduced by manipulation only; the latter by manipulation, with extension.

The accident happened on the third of May, but the patient was not well until the sixteenth of July.

CASE V.—Allis (Trans. of Pennsylvania State Med. Society, 1879), records the case of a colored man, aet. 42, injured by the caving in of some earth,

[1] "Institutes and Practice of Surgery," 1850. Vol. i., p. 359.

used as ship's ballast, upon him. He thought he was in the act of stooping when the earth fell, striking him upon the back in the region of the loins and pelvis. Seventy-eight days afterward luxation of the head of the right femur upon the dorsum ilii was detected. Some days later it became clear that the left hip was the seat of dislocation upon the thyroid foramen.

CASE VI.—This was my own case, which, as already said, occurred in 1878. On the 23d of October, in that year, there was a very violent storm of wind and rain in Philadelphia; and the patient, a German, aet. 40, finding his house rocking, started to run out. As he reached the door the house fell, and he was caught in the ruins. Being brought to the Episcopal Hospital, it was found that he had sustained a luxation of the head of the right femur into the thyroid foramen, and of the left upon the dorsum ilii. By simple flexion and adduction, the knee being at the same time pushed downward, the head of the right femur was replaced in the socket by Dr. Harvey, the resident surgeon. On my visit an hour or two afterward I easily reduced, by Reid's method, the left hip, which had presented the usual signs. The case did perfectly well, the man being able to walk about in a few days. He was, however, retained in the hospital for five or six weeks on account of a compound fracture of the right arm, sustained at the time of his other injuries.

CASE VII.—W. O. Roberts (*Louisville Med. News*, Jan. 21, 1883). This was the case of a healthy, well-developed man, aet. 62, who while stooping down was struck by a falling pile of planks and borne to the ground. "His left lower limb was abducted, semi-flexed, and measured five inches longer than the right. The right was adducted, semi-flexed, and rotated inward." It was therefore clear that the head of the right femur was on the dorsum ilii, while that of the left was in the thyroid foramen. Reduction of both dislocations was effected by Reid's method.

The patient's recovery was retarded by reason of injury sustained by the right sciatic nerve, producing a state of partial paralysis of the limb.

CASE VIII.—Schinzinger, of Freiburg (*Weiner Mediz-Presse*, Jan. 18, 1880). A man standing with his body bent forward, his hands resting on his knees, was buried beneath a mass of falling earth, leaving only his left leg exposed. On this his comrades pulled, in order to extricate him, with such force that he declared "they had pulled his leg off." His lower limbs were strongly devergent; active motion was impossiblc, passive limited and painful, especially on the left side.

The head of the femur could be readily felt on the pubis, and was returned to its socket without difficulty by Dr. Fritschi. Ten days afterward, as the pain and loss of motion in the right limb grew rather worse, an examination was made, and showed a sciatic luxation of that femur, which was reduced under anæsthesia.

The next three cases belong to the second category.

CASE IX.—Mr. Prichard (*Am. Journal of the Med. Sciences*, July, 1854, and *Association Med. Journal*, April 21, 1854.) A boy, aet. 15, a railway wagoner, was "doubled up" under a swiftly running truck, the body of which was only ten inches from the ground. "The knees and toes were inverted, the former closely approximating each other, while the latter rather overlapped one another. The head of each femur was distinctly felt under the glutæi, on the dorsum of the ilium."

Reduction was effected, in the right hip easily, in the left with some difficulty, the patient being under the influence of chloroform. The ultimate result is not stated.

CASE X.—Dr. Crawford, of Wilkesbarre, Pa. (*Am. Journal of the Medical Sciences*, October, 1876). The patient, a large, powerful man of about thirty, had a mass of rock fall on him from the roof of a mine in which he was at work. On examination, the head of the right femur was found resting on the dorsum ilii, that of the left in the ischiatic notch.

Reduction was effected by manipulation, with anæsthesia, and in ten days the man was able to walk.

CASE XI.—This case is derived from the catalogue of the Pathological Cabinet of the New York Hospital, p. 154, (1860), No. 310. Dislocation of both femora. Patient, a German, 27 years old, was struck, owing to the premature explosion of a blast, by a piece of rock, and received a deep lacerated wound of the arm, and contusion of the loins. He could give no intelligible account of the mode of the accident. On his admission into the hospital a few days after the injury, it was observed that he could not raise his feet, and also that there was some deformity about the left hip, but this latter, he was understood to say, was congenital. The wound in the arm remained in an unhealthy state, and by sloughing and suppuration, finally led to the patient's death, some seven months after the accident, he being confined to his bed during his stay in the hospital. Meanwhile, two months after his admission, the deformity about the hip was found to be due to a dislocation backward of the femur. An attempt at reduction was then made by pulleys, with but partial success; and in a few days the ordinary signs of dislocation into the sciatic notch returned. One month later, the right femur was found to be similarly dislocated. The autopsy showed both femora luxated backward near the sciatic notches. The head of the left femur rests on the dorsum, just above the sciatic notch; the cartilage still remains, but is very thin, while none of the bony parts of the femur are changed in structure or shape. An extensive layer of new spongy bone, perforated by numerous fenestrae, passes down from the dorsum ilii over the superior and anterior surfaces of the head and neck to the great trochanter, at which latter point alone it has become united to the femur. It thus forms a capsule for the head, and a long bridge from the trochanter to the pelvis, rendering the femur immovable. New bone, but in smaller quantity, has also been produced from the ischium in front of the sciatic notch, and aids to form a new socket for the head of the femur. The posterior ring of the acetabulum has been frac-

tured off, and there are some small, bony knobs growing from the bottom and lower border of the cavity; but otherwise the acetabulum is unchanged. On the right side, 1st, the head of the bone is more directly in the notch; 2d, there is no fracture of the acetabulum; 3d, the amount of new bone is not more than half that on the left side, and it has united with the head of the femur in several points. With these exceptions, the description of the changes on the left side may be applied, word for word, to those which exist on the right. There is bony union of a fracture of the left transverse process of the fourth lumbar vertebra, showing the blow on the loins to have been a severe one."

I have thought it better to quote this account entire, without any attempt at condensation. An earlier discovery of the luxations, if made, and reduction effected, would scarcely have influenced the result, but might perhaps have lessened the sufferings of the unfortunate man.

The remaining class consists of two cases only.

Case XII.—Sinogowitz (Eve's Remarkable Surgical Cases," p. 523). This case is quoted from the *Medical Examiner* for 1838, having been originally derived from the *Preanische Med. Zeitung*.

A sailor was sitting astride a plank floating on the water, when it was lifted suddenly by a wave in such a manner as to force his back upward against a cross-beam. Sinogowitz detected the character of the luxations at once, the head of each femur being in the thyroid foramen. Reduction was effected without great difficulty by powerful extension.

Recovery was tedious, owing to the severity of the injury to the lumbar vertebræ; the vesical and rectal sphincters were completely paralyzed for three weeks.

Case XIII.—T. C. Barker (*American Journal of the Medical Sciences*, April, 1854). The patient, a young Irishman, æt. 19, was walking across a scaffolding, when he slipped, and fell some twenty-five or thirty feet, alighting feet foremost upon a sandy bank in such a way as to force his thighs widely apart, whereby he sustained a luxation of both femora into the thyroid foramina.

Two days afterward the right femur was returned to its place by powerful extension, under chloroform.

Next day, after very great and long-continued efforts, anæsthesia being induced by a mixture of chloroform and ether, the head of the left femur was disengaged (having been driven through the obturator foramen so that it could be felt within the pelvis by the finger introduced *per anum*), and returned to its socket. Within ten days the man was walking about, and attending to his duties as a waiter on the table.

So far as my knowledge goes no other cases of simultaneous traumatic dislocation of both hips have ever been published than those now given. I am aware that Mr. Stanley did, in 1841, relate to the Royal Med.-Chirurgical Society[1] a case in which a gentleman, æt, 39, had both femora dislocated upward and backward, but this was from disease of the brain and spinal cord, not from injury. Another case, in which both femora were displaced in the same direction, but not simultaneously, in a girl of 12 recovering from fever, was reported by Chippendale[1]. This, also, is manifestly outside of the scope of the present paper.

For the production of dislocation of one hip the pelvis must be fixed, while the femur is acted upon at its lower portion by some force tilting the head of the bone out of its socket; the Y ligament probably often acting as a fulcrum, and giving the dislocating force an immense advantage in the length of the lower arm of the lever. Or the converse of this mechanism may prevail, the lower end of the femur being fixed, while the pelvis is irresistibly borne forward or backward.

Now, in order that both hips may be luxated, both femora must be fixed, while the pelvis is forcibly moved. And this was the mechanism in all the cases now detailed. When, as it may readily be perceived would generally happen, the force acting on the pelvis does so in a slightly oblique direction, there is a twist given to the lower part of the body, and the head of one femur passes backward, while the other goes forward. In the cases in which the force acts squarely, both femora are displaced alike. The oblique action of the force may be due to the position of the pelvis itself, or to a slight difference in that of the feet of the patient.

It may be noticed that I have not been at pains to discriminate between the posterior luxations, or to the dorsum ilii, or into the ischiatic notch, or between the anterior luxations, on to the pelvis or into the thyroid foramen. This is simply because such a distinction is not necessary for my present purpose.

With regard to the diagnosis of the lesions in question, I need only refer to the value of the suggestions made by Dr. Allis in his paper, above quoted, that the length of the femora should be compared not only in the extended position, bnt also when flexed at an angle of 90 degrees to the body. Attention to this point would obviate many mistakes which might otherwise very readily happen, as illustrated by some of the foregoing histories.

A few words only need be said as to simultaneous dislocations of other joints. Rare as are those of the hip, it is even more exceptional for the other articulations to suffer in this way.

The only case within my knowledge, concerning the shoulders, is reported by Caskie[2]. A laborer "was standing on the frame-work of a pile-driving machine, when the axle of a pulley at the base, upon which the chain which raises the ram, weighing thirty-six hundred weight, turns at right angles, broke, and the chain, springing upwards, caught him under one arm, threw him aloft, and he fell to the ground on the other arm." Hence the luxations were not, strictly speaking, simultaneous. Luxation of the right humerus into the axilla was at once detected, and reduced under chloroform. "Subsequently"—exactly how long is not stated—attention was directed to the abnormal position of the elbow of the left arm, which was found to be similarly dislocated. Chloroform was again given, and this luxation easily reduced.

[1] Transactions, vol. xxiv., p. 123.

[1] *British Medical Journal*, October 3, 1857.
[2] *British Medical Journal*, Nov. 26, 1881.

Simultaneous dislocation of both wrists has been, I believe, reported to have occurred in a few instances; but I have no references to cite, and should be inclined to question the correctness of the diagnosis, in view of the great rarity of the undoubted examples of displacement of that joint.

EXTERNAL MEDIAN PERINÆAL URETHROTOMY, FOR CYSTITIS AND FOR THE REMOVAL OF MORBID GROWTHS FROM THE BLADDER.

BY B. B. BONTACOU, M.D.

[Read before the Surgical Section of the American Medical Association, June, 1883.]

The operation is a median incision of the perinæum, commencing about one inch from the anus, and extending about one or one and a half inches towards the scrotum, according to the depth of the perinæum and size of the subject, and terminating in the membranous portion of the urethra, which should be laid open just in front of the bladder to the extent of one-half to three-fourths of an inch. This is done on a grooved staff, while the patient is in the lithotomy position, the bowels having previously been emptied. The operation is simple, almost bloodless, and rapidly and easily executed. The finger may then be admitted to the bladder, and by counter pressure above the pubes (if the patient is profoundly etherized) every part of the viscus may be made to touch the point of the finger, thereby obtaining most intelligent and thorough examination of the whole interior, and enabling the operator to remove with spoon, forceps or snare any morbid growth capable of being removed. The operation is especially adapted to cases of irritable bladder from vegetation or polypoid growths, and to cases of chronic cystitis from other causes, that have proved incurable by drugs and hygienic methods. The lateral operation, as for lithotomy, was in November, 1850, practiced by Prof. Parker, of New York, for the relief of an obstinate case of cystitis, the result of gonorrhœal inflammation, but this method, much more simple and less dangerous, has not been practiced for this class of cases, I believe, until Sir Henry Thompson, of London, in 1882, recommended and practiced it on a few cases with gratifying results, and his publications induced me to apply it to two very bad cases that came under my care, one of which, F. S., a young man of 28 years, of correct habits and specific history, and who was a strong laboring man, a moulder by occupation, until March, 1882, when he took sick with rheumatism, which lasted two months; and during the sickness his bladder trouble commenced, with scalding of the urine, accompanied by pus and mucus in large quantities. Efforts to expel this brought on distressing tenesmus and protrusion of the bowel, and he was obliged to void his urine every half hour night and day, and often the burning in the penis and straining were so unbearable that he was forced to cry aloud. He came under my care in October, 1882. Irrigation of the bladder and numerous other means were tried, but it was so painful to him that he would not submit to it with any regularity, and then only when under the effects of an anodyne injection of one or two teaspoonfuls of laudanum. Hyosciamus and camphor, salicylate of soda, bromide of potassium, buchu, uva ursa and epigea repens, balsam copaiba, turpentine and other remedies were given internally, while laudanum injections, opii suppositories and ergot were used by the rectum, and the bladder was washed out whenever he could tolerate it with solutions of borax and carbolic acid, chlorate of potassa, bi-carb. soda, permanganate of potassa, alum and sulph. zinci, with varying degrees of relief. On March 20, 1883, performed this operation, and found two polypoid growths hanging from the upper and anterior surface of the bladder, which I removed with the finger nail and forceps without producing much hæmorrhage. Bladder was thoroughly washed out, and a drainage tube of large caliber inserted and left in. The tube was retained with some difficulty, owing to the severe contraction of the viscus, but its presence was not painful to the patient, and through this his bladder was two or three times daily irrigated with solution of borax and carbolic acid, and the slime and pus escaped as fast as secreted. The agonizing burning pain in the penis ceased at once, and returned only on a few occasions, when the tube had become obstructed or had slipped down into the perinæal wound. He could sleep a greater part of the night without anodynes, and expressed himself as quite happy compared with his former state. About the middle of April both lower limbs swelled and all the joints were painful, which appeared as a form of rheumatism, and yielded to the internal use of salicylate of sodium. This man is now well enough to walk some distance daily, and his general health nearly restored to normal standard. This drainage tube was kept in use one month, since which time it has not been required, and the bladder empties itself mostly through the natural passage, but occasionally some escapes from the sinus, which is not yet entirely healed.

CASE No. 2.—I. H. N., moulder by occupation, 26 years of age, with no specific history, who for 3 or 4 years had been suffering from irritable bladder, took cold about 8 months ago and had a decided aggravation of his troubles, and 8 months ago married, soon after which he became much worse and was obliged to remain in his bed, being unable to walk on account of the painful straining and burning pain in the penis. He was obliged from this time to pass his urine every hour or oftener day and night and always accompanied by quantities of mucus and pus. He was admitted to St. Peter's Hospital at Albany, New York, and remained there ten weeks, and finding no relief returned to his home in West Troy, and came under my care April 4th, 1883. Irrigation of his bladder had been practiced by himself and attendants since January, 1883, but not regularly on account of the great pain attending the introduction of the catheter, and often suffering four or five hours torment after the operation. I did not succeed satisfactorily with the use of internal remedies, and May 7th, 1883, I performed median external perinæal urethrotomy and found just within the neck of the bladder on his left side a cock's comb-shaped vegetation, which I removed with forceps and my

finger nails, and inserted a drainage tube doubled upon itself, with two eyes in the inner curve of the doubles, and kept in the form of an open loop by a slender brass wire of sufficient temper to keep the knuckle of tube expanded within the bladder, this I found to be self-retaining, and has great advantage over the straight tubes in retaining its position without tying; the loop was curved downward so that it would lay in the cul-de-sac behind the neck and siphon off the morbid secretions disposed to collect there. Through this double tube his attendant easily irrigated the bladder from a fountain syringe without pain to the patient, and the relief this man experienced was, as he expressed it, charming. He was wasted to a great degree by his long suffering, but soon regained his appetite and enjoyed sleep at night for hours, whereas formerly he was every few minutes disturbed, and his suffering from the burning pain and tenesmus was pitiable, notwithstanding the use of liberal opiates by the rectum. All that ceased and has not returned, and is now dispensing with the tubes and able to sit up and walk about the rooms. The sinus still discharges urine, but the mucus and other evidences of inflammation have gone.

A singular accident occurred in the treatment of this case. A fortnight after the operation he was taken with a smart hæmorrhage which was controlled by use of cold alum solution and sub. sulph. of iron, which latter ingredient I should advise not to be again used, as the coagulum formed in the bladder was so hard that I was compelled to break it up and remove it piece-meal with the lithotomy forceps. I hope to be able to report shortly two of the cases of the same trouble, in which I intend to perform the operation.

GERMICIDES.—AN EXPERIMENTAL STUDY UPON THE COMPARATIVE VALUES OF ANTISEPTICS.

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[Read to the Section on Surgery and Anatomy.]

The deleterious effect of micro-organisms upon wounds can no longer be doubted. The so-called germ theory has passed into the realm of demonstrated fact. The patient labors of scores of very careful investigators during the last generation have slowly elaborated the fact that fermentation is dependent upon a particulate something, omnipresent in ordinary surroundings, and clearly shown that this something belongs to one or another of the varieties of exceedingly minute vegetable organisms, which compensate by number and rapidity of development that which they lack in size. In the study of these minute organisms the important question arises, perhaps second at present to none in the entire realm of the science of medicine, how can we be protected from their deleterious effects?

As the outcome of experimental research, there has been offered to the profession a large number of so-called germicides, and the thought which prompted the laboratory studies that form the basis of this paper was to test the comparative values of as large a number as the time at our disposal would permit. We take pleasure in acknowledging the painstaking and efficient aid of Dr. Samuel N. Nelson, of Cambridge, in the entire series of experiments.

At the outset it is well to bear in mind that one agent may possess a value dependent upon its power to destroy the vital organism, and another upon its power to restrain it from active development, although it has no destructive effect upon the organism itself. Thus, in a certain sense, as a result, this latter group of agents may be classed with the former, as, for example, chloride of zinc, which restrains the bacteria from development, because it acts chemically upon the albumen of the nutrient fluid.

Although the results of the experimental researches to be given, have an indirect bearing upon the medical value of the different agents tested, the primal thought which prompted the investigation was to ascertain the value which such agents may have in their surgical uses, for the destruction of organisms which cause putrefaction in wounds, the agent to be of value must act quickly, and it was therefore held as important that the material to be tested should have only a brief period of contact with the germ-bearing fluid. For this reason a considerable quantity, in each instance three drachms, of the test fluid was carefully mixed with one drachm of the putrefactive material and after a given measured time a small portion of the mixture, two or three drops only, transferred to the aseptic nutrient fluid which was carefully protected from contamination and placed under observation. If bacteria have preserved their vitality during the brief period of contact with the antiseptic, the minute quantity thus taken as *seed* will rapidly germinate in the nutrient solution and soon putrefactive changes will be apparent.

Thus we know that either the antiseptic was not of a sufficient strength, or not in contact for a length of time requisite, to act as a germicide. By varying the time of exposure and the strength of the antiseptic solution, the experiment is repeated, until the minimum time and strength have been ascertained, which are requisite to destroy the bacteria in the material used. Of course each test was verified by careful microscopic examination in order to determine the presence or absence of micro-organisms, and when found, their character and condition.

The first series of experiments which were undertaken more than a year ago were made as follows: The aseptic solution was prepared by boiling several small pieces of meat with a large quantity of water in a glass flask, purified by exposure to the flame of an alcohol lamp. This flask was stopped with a rubber cork perforated by two glass tubes for the convenience of decanting. The tubes were bent downwards and the ends were protected with carbolized gauze. The cork and tubes were carefully cleansed beforehand with carbolic acid. The resulting solution, if made with lean meat settles clear; if the meat is fat the solution is rendered cloudy by fine oil drops and must be prepared again. The solution thus in a proper condition was placed under a bell jar where it remained indefinitely aseptic. The combined material is placed in a test tube purified by heat and this is covered by a bell glass similiarly puri-

fied which rests upon a carbolized cushion. In this way it is subject to easy inspection and is protected from all external agencies.

It must be borne in mind that these experiments differ essentially from those of Dr. Koch, now widely known, and also from those equally interesting and instructive of Dr. Sternberg, recently published in the the April number of the *American Journal of Medical Sciences*. Here the test solutions are made of given strength and into these the bacteria under observation are introduced and allowed to remain. In Dr. Sternberg's experiments the standard of time chosen was two hours, in our own from five seconds to five minutes.

Although, I think the former methods perhaps the best for certain deductions which may be safely drawn therefrom, this difference of treatment of the various substances must be held in consideration in the comparison of the results obtained. In each instance the microscopical examination was made, and the results noted before reference to the substance being tested, in order that there might be no preconceived opinion of the value of the antiseptic to modify in any way the judgment. Uncharged aseptic tubes accompanied every experiment to note the accuracy of manipulation and these remained sterile. In each series a like quantity of septic solution was placed under test which invariably germinated. Thus we believe the experiments are in the main trustworthy.

Instead of continuing the tests at a uniform heat, nearly that of the blood, in a culture chamber, it seemed to us wiser to judge of their developments at the temperature of an ordinary room, i. e. about 70° F. since it is at this temperature that germs are being constantly reproduced prior to their invasion of the human organisms. It is true they germinate more rapidly at a higher temperature. Many experiments have shown that the spores of these microscopic plants withstand heat and cold to a remarkable degree, yet in their germinating state they are quite sensitive to considerable changes of temperature. In one set of experiments, during the winter, a cold night ruined the entire series. In the larger portion of the experiments the manipulation was made in the spray of one to twenty carbolic acid, so that atmospheric germs might the less endanger the safety of the fluids during the transfer. The micro-organisms were from beef-tea or other nutrient fluids "spoiled" by standing uncovered in a warm room and invariably contained micrococci, bacteria termo and vibrios.

The interesting experiments of Dr. Sternberg, furnished the American Association for the Advancement of Science, 1881, caused us to adopt his method of manipulation, which is much easier and safer. The bulbs used by Dr. Sternberg are not very unlike those used by Dr. Roberts in his experiments published in 1874. They are made from glass-tubing four-tenths of an inch in diameter, and will contain from one to four drams of fluid. With a little practice they are easily manufactured by one who is not an expert. After they have been partly filled with the nutrient fluid, they are sealed in the flame, and their aseptic condition rendered more certain by boiling in a strong salt solution for a considerable period, even for twenty-four hours. They are then put aside for observation. If aseptic, and they rarely fail to be, they may await use any convenient period. The end of the tube is broken when desired to be charged with the test solution, and again sealed, numbered and placed under observation. A slight film of albumen is freqently noticed upon the bulbs.

Inspection of the tables shows that the substances under observation which possess a germicidal power have in many instances a different effect over the different organisms. In most, however, the micrococci evince a superior and remarkable vitality. In a number of the tests where the fluid remained clear there were found a few inactive micrococci. These have been noted as sterile, and are presumably the organisms introduced, acted upon by the re-agent used. In a larger number, the fluid remaining clear, a few active cells have developed, and yet, only in a minute fraction of possibility of their healthy growth in the given quantity of nutrient fluid, although, as may be seen by reference to the tables, some of the tests were under observation two or three months.

It cannot be doubted that many of the articles here tested and marked, failed to possess decided germicidal qualities. By failure is meant that during the very brief period in which they were allowed contact they did not destroy the germinating power of the "seed" fluid.

ALCOHOL, 95. Exposed from one to five minutes, did not prevent the fluid from becoming turbid, and both the micrococci and bacteria termo were actively developed.

ACID BORACIC, 1–10, in most of the tests showed a restraining power of development, and yet active cells were usually present. As a germicide it is of little value, and yet the experiments show that the widespread confidence in its clinical use is not altogether without foundation.

BORO-GLYCERIDE, 1–20. This compound has been highly recommended abroad. Exposures of from one to five minutes gave failure in each instance.

ACID-CARBOLIC. The many and varied experiments with this re-agent, relied upon most of all by surgeons the world over, show that there are decided limits to its germicidal power; 1–40, or over two per cent. solution generally fails to destroy the micrococci, and the 1–20 solution, although usually effective, should be in contact for at least one or more minutes to be trustworthy. In one instance the micrococcus of gonorrhœa remained active after a thorough mixing with a 1–20 solution for some hours, and when placed in an aseptic generating fluid reproduced rapidly. Dr. Sternberg states: "Carbolic acid failed to destroy the micrococcus from pus in the proportion of five per cent., but this amount was fatal to the septic micrococcus." He further states, "that carbolic acid to be trustworthy as a *disinfectant* should be used in not less than five per cent. for a period of two hours, for it is necessary to be on the safe side, and we do not know at present whether all of the pathogenic bacteria, hypothetical or demonstrated, form spores or otherwise." Dr. Koch states, "that

the results of his experiments with carbolic acid were entirely unexpected," and says, "One is accustomed to consider a two per cent. solution as entirely trustworthy for the destruction of micro-organisms in a few seconds or minutes." He further adds, "that the surgeon who washes his hands and instruments with a solution of this strength and trusts thereby for the protection of his patients, would certainly endanger them to the infection from the bacillus of splenic fever and probably other organisms." To an overconfidence in, and a careless use of, carbolic acid in surgery I believe may be traced many failures and subsequent scepticism as to the value of antiseptic surgery.

Calcic Chloride, 1–10. The limited experiments teach that it possesses a power to restrain a rapid germ development.

Chloride of Zinc, 1–12. Exposed from five seconds to five minutes gave a clear solution and only a very few active micrococci. It is trustworthy at this strength and probably in weaker solution.

Oil of Eucalyptus, 1–100, 1–200. Time five seconds to two minutes. In nearly all the bulbs the fluid was turbid and micrococci and bacteria were found in limited numbers. It is not a powerful germicide, but like Listerine has its value chiefly in its aseptic qualities. Bucholtz showed by his experiments that it prevented putrefaction in strength of one part to 660, while carbolic acid to secure the same result required a strength of one to 200. Mr. Lister has given it a careful trial. It is not poisonous and quite unirritating, which for a variety of purposes is a very decided advantage over carbolic acid.

Hydrargyrum Bichloridum, 1–1,000, 1–1,500, 1–2,000.—This entire series of seventeen tests show a most remarkable germicidal power, even the weakest solution exposed for only ten seconds produces sterility, and the entire series gave a uniformity of result not attained by any other re-agent. It furnishes a possible explanation of the confidence of our fathers in their clinical results from the use of mercurials in certain diseases, and to-day clearly ranks first of all the known re-agents as a disinfectant. The danger from its poisonous qualities, must of course, be carefully guarded against, but with proper precautions it may be safely adapted to a wide range of uses, surgical and otherwise.

Listerine, from Lambert & Co., St. Louis. This preparation is "the essential antiseptic constituent of thyme, eucalyptus, baptisia, gaultheria, and mentha arvensis in combination. Each drachm contains two grains of benzo-boracic acid." Its germicidal power is less than carbolic acid solution 1-20 as thus tested, and yet it shows a decided restraining power over the development of micro-organisms. Exposed for a longer period it may be accounted as a trustworthy agent. It is safe for internal administration, and the laboratory experiments of Dr. Deems shows that it possesses remarkable aseptic qualities, that is, power to prevent rather than to destroy fermentation.

Acid Salicylic, 1-100, 1-200. The tests were for a shorter time than the average, the longer being only two minutes; but, as tabulated at these strengths, seventy-five per cent. were failures. However, there is observed a marked restraining power to the active development of micro-organisms. It acts more slowly than could be desired, although in chemical formula (C_7 H_6 O_3) so near like carbolic acid (C_7 H_6 O_3) does not compare favorably with it as a germicide.

"Platt's Chlorides." This well-advertised disinfectant has been commended by a long array of names of the profession well known in America. Exposed from five seconds to four minutes each test was a complete failure. The micrococcus and bacteria developed actively and decomposition soon ensued.

Quinine Sulphatis, 1-10. Unfortunately, only a single test was made of quinine. This, exposed for five minutes, at the expiration of eighty-four days, gave as a result a clear fluid, with a considerable sediment, but this consisted of many myceleum threads and blood cells, but no micrococci or bacteria. Since we are familiar with its primal value in certain of the zymotic diseases, it deserves, and doubtless will soon receive, a much more minute examination in order to determine its germicidal properties and value.

Thymol, 1-500, 1-1000, 1-1500. Ten experiments gave only one success, and this with a solution of 1-500 exposed five minutes. The active development of micro-organisms soon rendered the solutions turbid. It is evident from this that thymol has justly fallen from the high position some years since accorded to it as an antiseptic.

Balsam Peru, 1–2, Alcoholic Solution. In only four tests from one to five minutes, there was found a uniformity of result. The fluid remained clear and there were only a very few active micrococci, no bacteria, and like turpentine, balsam of Peru appears to be a very valuable and safe agent for surgical purposes. It shows also that the extensive use of it in the treatment of wounds by the natives of South America, is probably founded upon correct observation.

Turpentine. Full strength and diluted with equal quantities of alcohol. In the first series all failed, but the turpentine mixed very imperfectly with the foul solution. In the second series the success is exceptional, for even exposed thirty seconds the fluid remained completely sterile. Professor Koch's experiments show that turpentine is a very efficient germicide. One source of its value may be its power to absorb oxygen which it converts into ozone. The pine forests of the South, even in close proximity to rivers and swamps, the home of chill and fever, have long been known and resorted to because of their freedom from malaria. Further experiments with this promising agent should be undertaken to ascertain its full surgical value.

Glycerine has been recommended by a number of writers as an antiseptic dressing for wounds. Dr. Park, from his personal experience recommends it highly.[1] On account of its well known preservative qualities it would seem to be of value in wound treatment. As stated, fermentation soon developed and the micro-organisms were numerous and active.

Beta-Napthal, 1—10. This is a recent product of the petroleum series, and comes from Germany. Exposed for five minutes the solution remained sterile.

[1] *Chicago Medical Journal and Examiner*, October, 1882.

NAPTHALIN, 1—20. This product has also been recently introduced by Lücke and Fischer, of Strasbourg, as an efficient germicide. Dr. George R. Fowler, of Brooklyn, has published a carefully-prepared paper upon its uses and merits[1]. It belongs, like the former, to the petroleum product, is a white crystalline body, is quite inexpensive, and claimed to be without danger. The tests were from thirty seconds to five minutes. In all the fluid remained clear, and only a few active micro-organisms appeared. It would seem to be a trustworthy and valuable addition to the surgeon's armamentarium. Surgical dressings made from it are easily prepared. Dr. Fowler's admirable article is worthy of careful study.

BICHROMATE OF POTASH, 1—50, 1—100. Exposed from thirty seconds to five minutes. In each test there were a few active growths, but its restraining power in controlling development was clearly manifest.

PERMANGANATE OF POTASH. 1—50, 1—100. The results under exposure of five minutes and less, were all failures, although the bacterial development was only in limited extent, and the results with open tubes and bulbs were quite similar. This is in marked contrast with the experience of Dr. Sternberg, who places this re-agent as second on his entire list, and trustworthy in one part to 800.

SALT has been recognized from time immemorial as the great universal preservative of animal tissues from putrefaction. This it does in part by its absorption of fluid from the tissues, but chiefly by its aseptic qualities. It is a well-known fact that when meats have begun to undergo putrefaction the process is restrained very imperfectly by the use of salt and other means are commonly resorted to. A saturated solution in hot water was used in the testing. Exposure from five seconds to two minutes. The fluid early became turbid, and micro-organisms developed rapidly. It is evidently not of much worth as a germicide, and must possess in surgery a purely hypothetical value.

IODOFORM. It is worthy of remark that tests were attempted with this re-agent, but, owing to its insolubility, this substance was found unfit for the class of tests here reported.

For a long period I have used iodoform in surgical dressing with satisfactory result. Recently, in the treatment of a deep phagedenic chancre, the sore was carefully cleaned, and refilled daily with a free quantity of iodoform. The improvement was not satisfactory, and at the fifth day microscopical examination showed abundant active micrococci, with everywhere crystals of iodoform interspersed. Its insolubility is a very evident objection.

In conclusion, we must repeat that we offer our observations to the profession only as an incomplete study, upon a subject beset with many difficulties. The field is large, and the labor involved great, although of intense interest, and of an importance of which the present only offers a possible faint indication. The splendid researches of Prof. Koch, under the authority and by the aid of the German government, furnishes a magnificent monument of painstaking labor.

Our own government has done much for surgery, through her corps of distinguished laborers belonging both to the army and the navy. May the good work be furthered by the selection of one like Dr. Sternberg (who has shown such exceptional fitness for the task) for this purpose, and suitable aid furnished for the carrying on of elaborate scientific investigations in a direction of such value and great promise.

The following tables show the details of the experiments alluded to in this paper:

[1] Annals of Anatomy and Surgery, May, 1883.

SERIES I.—TEST TUBES.

SUBSTANCE TESTED.	Strength of Solution.	Duration of Exposure.	Duration of Test Days.	Condition of Fluid.	Scum.	Sediment.	Presence of Micrococcus.	Activity of Micrococcus.	Presence of Bacterium Termo.	Activity of B. Termo.	Presence of Vibrio.	Activity of Vibrio.	Success or Failure.	REMARKS.
Acid Boracic..	1.10	5′	62	turbid.	mycelium growth .	Much	M	active.	B	active	..	.....	F	
Acid Carbolic.	1.40	10″	14	slightly turbid.	.....	.....	M	active.	....	.....	..	.....	F	
"	1.40	10″	14	slightly turbid.	.....	slight	M	active.	....	.....	..	.....	F	
"	1.40	10″	14	turbid	.....	sed ..	M	active.	B	active	V	active	F	Doubtfully sterilized.
"	1.40	10″	14	turbid	scum.....	sed ..	M	active.	B	active	V	active	F	Doubtfully sterilized.
"	1.40	30″	14	clear.	.....	slight	....	active.	....	.....	..	.....	S	Nothing microscopically.
"	1.40	30″	14	slightly turbid..	.....	slight.	M	aative.	....	.....	..	.....	F	
"	1.40	30″	14	clear	.....	slight.	M	not active.	....	.....	..	.....	S	
"	1.40	30″	14	clear	.....	slight.	M	not active.	....	.....	..	.....	S	
"	1.40	1′	14	clear	.....	slight.	M	active.	....	.. ..	..	.....	F	
"	1.40	1′	14	clear	.....	slight.	M	active.	....	.....	..	.....	F	
"	1.40	1′	14	turbid	scum.....	slight.	M	active.	B	active	V	active	F	Doubtfully sterilized.
"	1.40	1′	14	clear	scum.....	slight.	M	active.	B	active	V	active	F	Doubtfully sterilized.
"	1.40	2′	84	clear	.....	.....	....	.....	....	.....	..	.....	S	Nothing microscopically.
"	1.40	2′	14	turbid..	much scum.....	much	M	active.	B	active	V	active	F	
"	1.40	2′	14	turbid	mycelium.....	much.	M	active.	B	active	..	.....	F	Doubtfully sterilized.
"	1.40	2′	14	turbid	scum	much.	M	active.	B	active	..	.....	F	Doubtfully sterilzed.
"	1.40	2′	14	slightly turbid..	.....	much.	M	active.	....	.....	..	.....	F	Mycoderma cells..
"	1.40	3′	84	clear.....	.....	.....	....	.....	....	.....	..	.....	S	Nothing microscopically.
"	1.30	10″	14	clear	.....	very slight.	....	.....	....	.....	..	.....	S	Microscopically—a few red blood cells.
"	1.30	10″	14	clear.....	.....	very slight.	....	.....	....	.....	..	.....	S	Nothing microscopically.
"	1.30	30″	14	clear	.....	sed ..	....	.....	....	.....	..	.....	S	Microscopically—a few granules and shreds.

Series I.—Test Tubes.—*Continued.*

Substance Tested.	Strength of Solution.	Duration of Exposure.	Duration of Test Days.	Condition of Fluid.	Scum.	Sediment.	Presence of Micrococcus.	Activity of Micrococcus.	Presence of Bacterium Termo.	Activity of B. Termo.	Presence of Vibrio.	Activity of Vibrio.	Success or Failure.	Remarks.
Acid Carbolic.	1.30	30″	14	turbid		sed	M	active.	B	active	V	active	F	Doubtfully sterilized.
"	1.30	30″	14	clear		sed	M	active.	....	.....	..	.....	F	
"	1.30	30″	14	slightly turbid	scum	sed	M	active.	B	active	..	.....	F	Doubtfully sterilized.
"	1.30	30″	14	clear		sed	M	active.	....	.....	..	.....	F	
"	1.30	30″	14	clear		sed	M	active.	....	.....	..	.....	S	Microscopically—a few red blood cells.
"	1.20	5′	61	clear		slight.	....	.....	....	.....	..	.....	S	Nothing microscopically.
"	1.20	5′	84	clear		.....	....	.....	....	.....	..	.....	F	
"	1.20	5′	14	clear		slight.	M	active.	....	.....	..	.....	F	
"	1.20	5′	14	clear		very slight.	v'ry few M	active.	....	.....	..	.....	F	Probably not sterilized at first.
"	1.20	5′	14	slightly turbid		.....	few M	some dead some active.	....	.....	..	.....	S	Nothing microscopically.
"	1.20	5′	14	clear	slight scum	slight.	M	active.	B	active	V	active	F	Probably not sterilized at first.
"	1.20	10″	14	clear		very slight.	...	.....	....	.....	..	.....	S	Nothing microscopically.
"	1.20	10″	14	clear		"	....	.....	....	.....	..	.....	S	Nothing microscopically. [cells.
	1.20	10″	14	clear		.....	....	.....	....	.....	..	.....	S	Microscopically—a few red blood
"	1.20	10″	14	clear		sed	M	active.	B	active	V	active	F	Doubtfully sterilized.
Acid Salicylic.	1.100	1′	84	turbid		slight.	....	.....	B	active	..	.....	F	
"	1.100	3′	84	clear		.....	....	.....	....	.....	..	.....	S	Nothing microscopically.
Boroglyceride.	1.30	1′	60	turbid		sed	M	active.	B	active	..	.....	F	
"	1.30	3′	61	turbid		sed	M	active.	B	active not	..	.....	F	
Calcium Chloride.	1.10	5′	21	clear	mycelium growth	.....	M	active.	B	active	..	.....	F	
Hydrargyrum Bichloridum.	1.2000	30″	14	clear		slight.	few M	not very active.	....	.....	..	.....	S	Microscopically—a few red blood cells.
"	1.2000	30″	14	clear		slight.	few	"	....	.....	..	.....	S	
"	1.2000	1′	14	clear		slight.	few	"	....	.....	..	.....	F	
"	1.2000	1′	14	clear		.....	few	active.	....	.....	..	.....	F	
"	1.1500	10″	14	clear		.....	....	.....	....	.....	..	.....	S	Nothing microscopically.
"	1.1500	10″	14	clear		.....	....	.....	....	.....	..	.....	S	Nothing microscopically.
"	1.1500	30″	14	clear		.....	....	.....	....	.....	..	.....	S	Nothing microscopically.
"	1.1500	1′	14	clear		.....	....	.....	....	.....	..	.....	S	Microscopically—a few red blood cells.
"	1.1000	5′	14	clear		.....	....	.....	....	.....	..	.....	S	Nothing microscopically.
"	1.1000	10″	14	clear	mycelium	sed	few	active.	....	.....	..	.....	F	
"	1.1000	10″	14	clear		slight.	M few	active. not	....	.....	..	.....	F	
"	1.1000	30″	14	clear		.....	M few	active.	....	.....	..	.....	S	
"	1.1000	30″	14	clear		.....	M	.....	....	.....	..	.....	S	Nothing microscopically.
Listerine	.....	5′	61	turbid		.....	M	active.	B	active	V	active	F	Mycelium growth.
"	.....	10″	61	turbid		.....	M	active.	B	active	V	active	F	
"	.....	1′	84	turbid	mycelium growth	sed	M	active.	B	active	V	active	F	
"	.....	2′	84	turbid	mycelium growth	sed	M	active.	B	active	V	active	F	
"	.....	4′	84	clear		.....	....	.....	....	.....	..	.....	S	Nothing microscopically.
Oleum Eucalyptus	1.100	3′	84	slightly turbid		.....	M	active.	B	active	..	.....	F	
"	1.100 arc.	1′	62	clear		much.	....	.....	....	.....	..	.....	S	
" Platt's Chlorides"	.....	5′	61	turbid		much.	M	active.	B	active	V	active	F	
"	.....	10″	1	turbid		much.	M	active.	B	active	V	active	F	
"	.....	1′	23	turbid		much.	....	.....	B	active	..	.....	F	
"	.....	2′	23	turbid		much.	M	not active.	B	active	..	.....	F	
"	.....	4′	23	turbid		sed	M	not active.	B	active	..	.....	F	
Potassium Permaganas	1.50	2′	21	turbid	mycelium growth	sed	M	active.	B	active	..	.....	F	
"	1.100	4′	62	clear		sed	M	active.	....	.....	..	.....	F	
Quiniæ Sulphas	1.10	5′	84		mycelium	sed	....	.....	....	.....	..	.....	S	Many mycelium threads and [blood cells.
Thymol	1.1000	2′	84	clear		slight.	few M	not active.	few B	not active	..	.....	F	
"	1.1000	4′	84	clear		slight.	m'y M	not active.	....	.....	..	.....	S	
"	1.500	1′	84	clear		.....	few M	not active.	....	.....	..	.....	S	
"	1.500	3′	84	clear		.....	....	.....	....	.....	..	.....	S	Nothing microscopically.
Zinc Chloride.	1.12	5′	84	clear		.....	....	.....	....	.....	..	.....	S	Nothing mtcroscopically.
Sterlized Fluid	.....	....	..	clear		.....	....	.....	....	.....	..	.....	S	Microscopically—a few red blood cells.
"	.....	....	..	clear		.....	....	.....	....	.....	..	.....	S	Microscopically—a few red blood cells.
"	.....	....	..	clear		.....	....	.....	....	.....	..	.....	S	Microscopically—a few red blood cells.
"	.....	....	..	clear		.....	....	.....	....	.....	..	.....	S	Microscopically—a few red blood cells.
"	.....	....	..	clear		.....	....	.....	....	.....	..	.....	S	Microscopically—a few red blood cells.
"	.....	....	..	clear		.....	....	.....	....	.....	..	.....	S	Microscopically—a few red blood cells.
Plus Foul Solution	.....	....	..	turbid	scum	sed	M	active.	B	active	V	active	..	
"	.....	....	..	turbid	scum	sed	M	active.	B	active	..	active	..	

SERIES II.—BULBS.

SUBSTANCE TESTED.	Strength of Solution,	Duration of Exposure.	Condition of Fluid.	Date Turbidity First Noticed.	Scum.	Sediment,	Duration of Test Days	Presence of Micrococcus	Activity of Micrococcus	Presence of Bacterium Termo.	Activity of B Termo.	Presence of Vibrio.	Activity of Vibrio.	Success or Failure.	REMARKS.
Acid Boracic..	1.150	1′	clear	5	scum...	slight sed. of albumen,	6	few M	active	few B	active	few V	active	F	Mycoderma cells.
"	1.150	2′	torbid	3	.....	"	8	M	active	B	active	....	.....	F	
"	1.150	5′	turbid	2	.....	"	8	M	active	B	active	....	.....	F	
"	1.10	5″	clear.....	..	.....	"	9	....	.....	....	.....	V	active	F	
"	1.10	30″	clear	..	.....	"	9	few M	active	few B	active	few V	active	F	Mycoderma cells.
"	1.10	1′	clear	..	.....	"	9	few M	active	few B	active	....	.....	F	
Acid Carbolic.	1.40	10″	slightly turbid	6	.....	"	26	M	active	...	.....	....	.....	F	
"	1.40	30″	slightly turbid	9	.....	"	27	M	active	B	active	V	active	F	
"	1.20	5″	clear	..	.....	"	27	M	.....	....	.....	....	.....	S	Nothing mycroscopically.
"	1.20	10″	clear.....	..	.....	"	27	few M	not active	....	.....	....	.....	S	
Acid Salicylic.	1.200	30″	turbid	9	scum..	"	9	few M	active	few B	active	....	.....	F	
"	1.200	1′	turbid	8	.....	"	8	M	active	B	active	V	active	F	
"	1.200	2′	turbid	3	.....	"	8	M	active	B	active	....	.....	F	Mycelium.
"	1.100	5″	clear	1	.....	"	12	M	active	B	active	V	active	F	
"	1.100	30″	clear	..	scum...	"	9	M	active	B	active	V	active	F	Mycoderma cells.
"	1.100	1′	clear	..	.....	"	9	few M	active	....	.....	....	.....	S	Microscopically—a few red blood cells.
Alcohol.....	.....	1′	turbid	1	.....	"	8	M	active	B	active	V	active	F	
"	.....	2′	slightly turbid	..	scum...	"	6	few M	active	few B	active	V	active	F	Mycoderma cells.
"	.....	5′	slightly turbid	3	.....	"	8	M	active	B	active	....	active	F	
Balsam Peru..	1.2 alc.	1′	clear	..	scum...	"	5	M	active	....	.....	....	.....	S	Liquid irridescent. Mycorderma cells.
"	1.2 alc	5′	clear	..	.....	"	5	M	active	....	.....	....	.....	S	Liquid irridescent.
"	.....	1′	clear	..	.....	"	5	M	active	..	.....	....	.....	S	Liquid irridescent—fat globules.
"	.....	2′	clear	..	.....	"	5	few M	active	...	.....	....	.....	S	Liquid irridescent—fat and mycolium.
Beta Napthol.	1.10 alc.	1′	turbid.	5	.....	"	5	M	active	....	.....	....	.. ...	F	
"	1.10 alc.	5′	clear	..	.....	"	5	M	active	....	.....	....	.....	S	
Boroglyceride.	1.20	1′	clear	..	.....	"	7	M	active	....	.....	....	.....	F	Slight precipitate of albumen at once —microscopically—a few red blood cells.
"	1.20	3′	turbid	1	.....	"	3	M	active	B	active	....	.....	F	
"	1.20	5′	turbid	1	.....	"	2	M	active	B	active	V	active	F	
Glycerine.....	.....	1′	slightly turbid	8	.....	"	8	M	active	few B	active	....	.....	F	
"	.....	2′	slightly turbid	5	.....	"	6	M	active	B	active	....	.....	F	
"	.....	5′	slightly turbid	5	scum...	"	8	few M	active	few B	active	....	.....	F	
Hydrargyri Bichloridum	1.2000	10″	clear	..	.....	"	15	few M	not active	...	.....	....	.....	S	
"	1.2000	30″	clear	..	.....	"	15	....	.....	....	.....	....	.....	S	Microscopically—a few red blood cells
"	1.1000	5″	clear	..	.....	"	15	...	.....	....	.....	....	.....	S	Microscopically—a few red blood cells
"	1.1000	10″	clear	..	.....	"	15	few M	not active	....	.....	....	.....	S	
Listerine.....	1.2	10″	slightly turbid	9	.....	"	24	M	active	...	.....	....	.....	F	
"	1.2	10″	clear	..	.....	"	16	....	active	....	.....	....	.....	S	Microscopically—a few blood cells.
"	1.2	30″	slightly turbid	6	.....	"	24	few M	active	B	active	....	.....	F	
"	1.2	30″	slightly turbid	6	.....	"	15	M	active	B	active	....	.....	F	
"	1.2	1′	very turbid...	8	....	"	24	M	active	B	active	V	active	F	
"	1.2	1′	clear	..	... .	"	15	....	.....	..	.....	....	.....	S	Nothing miscroscopscally.
"	1.2	1′	slightly turbid	6	.....	"	15	M	active	B	active	....	.....	F	
"	1.2	2′	slightly turbid	6	.....	"	15	M	active	....	.....	....	.....	F	Miscroscopically—a few red blood cells.
"	.....	5″	slightly turbid	11	....	"	24	M	active	B	active	.....	.....	F	
"	.....	10″	slightly turbid	11	.....	"	27	M	active	...	.....	....	.....	F	
"	.....	30″	turbid	6	.....	sed.	24	M	active	B	active	....	.....	F	
Napthalin....	1.20 Alcohol.	30″	clear	..	.....	"	7	few M	active	....	....	....	.....	S	Crystals precipitated at once.
"	1.20 Alcohol.	1′	clear	..	.....	"	7	....	.....	....	.....	V	active	F	Crystals precipitated at once.
"	1.20 Alcohol.	5′	clear	..	.....	"	7	M	active	....	.....	few V	active	F	Crystals precipitated at once.
"	1.10	5″	clear	..	.....	"	7	M	active	few B	active	....	.....	F	Crystals precipitated at once.
"	1.10	30″	clear	..	.....	"	7	M	active	....	.....	....	.....	S	Crystals precipitated at once.
"	1.10	1′	clear	..	.....	"	7	few M	active	...	.....	....	.....	S	
Oleum Eucalyptus	1.200 alcohol.	30″	turbid	8	.....	"	8	few M	active	few B	active	....	.....	F	
"	1.200 alcohol.	1′	turbid	3	.....	"	8	M	active	B	active	....	.....	F	

SEERIES II.—BULBS.—*Continued.*

Substance Tested.	Strength of Solution.	Duration of Exposure.	Condition of Fluid.	Date Turpidity First Noticed.	Scum.	Sediment.	Duration of Test Days.	Presence of Micrococcus.	Activity of Micrococcus.	Presence of Bacterium Termo.	Activity of B. Termo.	Presence of Vibrio.	Activity of Vibrio.	Success or Failure.	Remarks.
"	1.200 alcohol.	2′	turbid	3	.....	slight sed, of albumen,	8	few M	active	few B	active	....	....	F	
"	1.100 alcohol.	30″	turbid	4	.....	"	6	few M	active	few B	active	few	active	F	
"	1.100 alcohol.	1′	turbid	3	.....	"	8	M	active	....	.....	few V	active	F	
Potassii Bichromas	1.50	1′	clear	..	.....	"	7	few M	active	few B	active	....	.....	F	
"	1.50	2′	clear	..	.....	"	7	M	active	....	.....	....	.....	F	
"	1.50	5′	clear	..	.....	"	7	....	.....	....	.....	....	.....	S	Microscopically—a few red blood cells.
Potassii Permanganas	1.100	1′	turbid	4	scum...	"	4	few M	active	few B	active	....	.....	F	
"	1.100	5′	clear	..	scum...	"	7	M	active	....	.....	....	.....	F	
"	1.50	30″	clear	..	.....	"	7	M	active	....	.....	....	.....	F	Micoderma cells.
"	1.50	2′	turbid	2	.....	"	2	M	active	few B	active	V	active	F	
Salt	satur'ed solution hot water,	5″	turbid	3	.....	"	8	M	active	B	active	V	active	F	
"	"	30″	turbid	3	.....	"	8	M	active	B	active	V	active	F	
"	"	1′	turbid	2	.....	"	8	M	active	B	active	....	.	F	
"	"	2′	turbid	2	.....	"	8	M	active	few B	active	...	.....	F	
Thymol	1.1500	30″	turbid	2	.....	"	4	M	active	...	. ...	....	.....	F	
"	1.1500	2′	turbid	1	.....	"	2	M	active	B	active	....	.....	F	
"	1.1500	5′	turbid	1	.....	"	2	M	active	B	active	V	active	F	
"	1.500	15″	turbid	2	.....	"	7	M	active	...	.....	....	.....	F	
"	1.500	30″	clear	..	.....	"	7	M	active	....	.....	....	.....	F	
"	1.500	2′	turbid	1	.....	"	2	M	active	B	active	...	.....	F	
Turpentine	.....	5″	turbid	6	.....	"	15	M	active	B	active	....		F	Imperfectly mixed.
"	.....	10″	turbid	6	.....	"	15	M	active	B	active	V	active	F	Imperfectly mixed.
"	.....	30″	turbid	6	.....	"	15	M	active	B	active	....	.....	F	Imperfectly mixed.
"	1.2 alcohol.	30″	clear	..	.....	"	16	...	.. ...	....	.....	....	.....	S	Microscopically—a few red blood cells
"	1.2 alcohol.	1′	clear	..	.....	"	16	....	.....	....	.....	....	.....	S	Microscopically—a few red blood cells
"	1.2 alcohol.	2′	clear	..	.....	"	16	....	..	..	.....	....	....	S	Mycelium.
Zinci Chloridum	1.12	5″	clear	..	.....	"	7	....	.....	....	.....	....	.....	S	Microscopically—a few red blood cells. Doubtful if added the two drops to this bulb.
"	1.12	30″	clear	..	.....	"	7	M	active	.. .	.....	...	.....	F	
"	1.12	1′	clear	..	.....	"	7	M	active	B	active	....	.....	F	
"	1.12	15′	turbid	3	.....	"	4	M	active	few B	active	....	.....	F	
Sterilized Bulb.	.....	....	clear	..	.....	"	20	....	.....	....	.....	....	.....	S	Microscopically—a few red blood cells
"	.....	....	clear	..	.....	"	20	....	....	..	.....	....	.....	S	Microscopically—a few red blood cells
Plus Foul Solution	.....	....	turbid	2	. .....	"	20	M	active	B	active	V	active	..	

ON A FORM OF INGUINAL HERNIA LIABLE TO BE OVERLOOKED.

BY A. H. WILSON, M.D., SOUTH BOSTON, MASS.

[Read to the Surgical Section of the American Medical Ascociation, at Cleveland, June, 1883.]

I do not claim to have discovered any new form of hernial displacement, or to have devised any new operation for its radical cure. Indeed, to my mind, most of the so-called radical cures are either slight modifications of long-established operations, or are old operations that have fallen into disuse revived. What I do claim, however, Mr. Chairman, is this: That a form of hernia recognized by older surgeons as obscure and difficult of diagnosis, and as very frequently resulting in death because of such failure to ascertain its existence, is as frequent to-day as in the days of Cooper, Pott, and Scarpa, and yet most of the present writers and teachers say but little about its true character and importance. Bubonocele or incomplete external inguinal hernia begins by the protrusion of the viscera at the internal abdominal ring over the spermatic cord into the inguinal canal. As it does not overcome the resistance of the lower opening, the tumor is retained in the canal. The cremaster muscle, the spermatic and epigastric vessels have the same relative position in this as in the complete external inguinal hernia; that is, the fibers of the former are spread over the peritoneal sack on its anterior aspect; the spermatic vessels run along its posterior surface, and the epigastric artery is found on the inner or pubic side of its mouth. The tumor is covered externally by the aponeurosis of the external oblique muscle of the abdomen; its opposite or internal surface rests on the fascia transversalis.

It is bounded below by the crural arch; above by the inferior margin of the internal oblique and transversalis muscles, of which the fibers are more or less raised. The resistence which the aponeurosis of the external oblique and the facia transversalis may be expected to oppose to the development of a tumor in the narrow space left between them and the ready passage of the protrusion as it increases through the external abdominal ring, will account for the incomplete inguinal hernia being usually small. The protruded parts, however, although bound down by the external oblique aponeurosis so that they do not constitute an external swelling, gradually separate the sides of the inguinal canal, which yields toward the abdomen and extends sometimes considerably below the limits of that canal. Hence, on operation or dissection, we find the hernial tumor larger than we should have expected. The bubonocele may be either an enterocele, an epiplocele or an entero-epiplocele, and if the latter exist, and be composed chiefly of omentum, with only a part of the caliber of the intestine included in the tumor, the symptoms of its presence may be so very mild in character as to fail to attract the attention of the patient until some sudden violence develops it into a complete inguinal hernia; or the patient comes to his physician complaining of pain in the umbilical region, possibly of a severe character, requiring large doses of morphine to relieve; and the surgeon, if he suspects rupture, examines the inguinal region and finds a small hard tumor just above the middle of Ponpart's ligament, which he considers an enlarged inguinal lymphatic gland, and then turns to search for some other cause for the symptoms. Should vomiting of a stercoraceous character supervene, he would be likely to re-examine, and even then a good surgeon may fail in his diagnosis.

A medical friend practicing in the vicinity of Boston has kindly furnished me with the notes of a case occurring in his own practice which possesses many points of interest in the consideration of bubonocele, which I will read.

G. B., aged 63, married, medium habit, health generally good, shoe-cutter by occupation, was attacked suddenly about 3 P. M., July 31, 1878, with pain in abdomen; was called to see him some seven or eight hours later, and found him suffering from pain, severe in character, and rather above the umbilicus, together with nausea and vomiting. He said he had suffered several times from like attacks, but that a hypodermic injection of morphine always gave prompt relief. He was in bed and undressed, and I accidentally saw a left-side truss lying in a chair. I inquired as to hernia. He replied that he had worn a truss for it several years, and that it had given him no trouble, and was not troubling him at that time. Upon my attempting to examine for myself he was irritable, and refused to permit an examination to ascertain as to the presence or absence of hernia. He pettishly replied that he had been in the same condition before, and that an injection of morphine beneath the skin always relieved him, and that was all he wished to have done. I injected the morphine as he wished, and, as he soon grew comfortable, came away; was called again, however, in about five or six hours, and found him suffering as before. I again asked for an opportunity to make an examination. He examined himself a moment, and then assured me that there was neither bunch, pain or soreness in that region.

I repeated the injection of morphia, which gave him relief from pain, and came away. August 1st, he remained in bed, suffering at times, and requiring the subcutaneous injection twice or thrice during the day. No marked symptoms, except pain near the umbilicus and vomiting. During the night vomited fæcal matter in large quantities several times. At my morning call, August 2, found him in pain and suffering from nausea. Pulse and temperature increased. Mentally clear and even playful. I again asked permission to examine; but he refused with much impatience. He, however, examined himself, and insisted that there was no trouble in the inguinal region; thereupon, without any suggestion from the patient or his family, I called his former medical attendant in consultation; but the patient would grant him no liberties that he had not granted me. Hence we were in doubt as to the pathology of the case. Pain and vomiting still continued, but no especial tenderness or meteorism of abdomen. Febrile symptoms, together with prostration, continued till August 6th or 7th, when pain and vomiting ceased. He was hopeful and confident during his whole sickness. During the 8th and 9th sank and died, nine and a half days from commencement of the attack.

Autopsy August 10, twelve hours after death. External examination furnished no suggestions. Examination of abdominal cavity showed close to left internal inguinal ring a portion of ilium about two inches in length, completely sphacelated; also the internal surface of ring was gangrenous to the depth of from one-sixth to one-eighth of an inch. That a loop of intestine about an inch in length had entered the internal ring; become strangulated; passed on to mortification and become spontaneously reduced, admitted of no doubt.

Here, then, is a case of strangulated bubonocele, resulting in mortification and death, where there is an entire absence of pain in the inguinal region during the whole course and progress of the disease; and if we are to rely upon the statement of the patient, there was neither bunch, pain or soreness in the inguinal region. I think it fair, however, to assume that if any tumor was present in the groin it must have been quite small. Had my friend not seen the truss would he naturally, from the symptoms, have suspected hernia before the appearance of the stercoraceous vomiting? I think not.

Sir Astley Cooper gave the first clear description of incomplete external inguinal hernia. "This tumor," says he, "occurs much more commonly than is generally supposed; for I have frequently found it in the dissection of bodies of persons who have never been suspected of laboring under the disease, nor ever wore a truss. When strangulated, these cases more commonly fall under the care of the physician than the surgeon; for, as the patient himself is not conscious of having a tumor at the groin, the

symptoms of strangulation are ascribed to inflammation of the bowels, without a suspicion of the true cause having been excited, and the patient dies, as is supposed, of idiopathic peritonitis."

He also describes the following case: A man was admitted into St. Thomas's Hospital with symptoms of strangulated hernia, which for five days had been treated as a case of simple inflammation of the bowels, without a suspicion of the true cause having been excited. On examination a fullness could be perceived above Poupart's ligament, and when this was compressed, a small tumor like the end of the little finger, appeared at the abdominal ring, which again receded to its former place on withdrawing the pressure; pain was felt at the same time and in coughing much uneasiness was produced at that spot. As five days had elapsed between the first accession of the symptons and his admission into the hospital, the performance of an operation afforded but little prospect of success, for besides vomiting he had been troubled with a hiccough for forty hours, his belly was sore on pressure, and his pulse so small as scarcely to be distinguished. However, as it was the only possible chance for recovery, the operation was undertaken. On cutting down to the tumor, it was found to be produced by a hernial sack an inch and a half long, and when this was opened about half the circumference of one of the small intestines was found to be contained within it, together with a quantity of sanious serum. The stricture which existed an inch and a half above the abdominal ring was then divided. The intestine was discovered, but the point of the knife having accidently touched one of its superficial veins, the blood issued from it freely, proving that the bowel was in a fit state to be returned, which was accordingly done as soon as the bleeding ceased. The patient had stools in twelve hours, and although he afterward suffered from a severe purging, he ultimately recovered. Here is a report of a case occurring in the days of Sir Astley Cooper, and under his own observation, and what reason have we to believe that the same errors in diagnosis are not made to-day; Prof. Agnew says in the first volume of his work on surgery, page 468, "that in concealed inguinal hernia, a portion of the intestine may be strangulated at the internal ring so small as to render it impossible for the surgeon to discover its existence either by sight or touch. I have witnessed a number of deaths from this form of hernia which have been treated as cases of colic." I think we may fairly conclude that notwithstanding the many great improvements that have been made in modern surgery, we fail to-day to impress upon the medical student, the liability of its occurrence and the great danger of excluding the possibility of its existence, because *all* the ordinary symptons of hernia are not present. I am surprised that so many of the authors of the recent works on surgery should dismiss this; to my mind, important form of inguinal hernia, some with barely a reference and others with the briefest sort of an allusion. The question naturally arrises, that having taken the ground that this form of disease is frequently overlooked, what is the remedy? I answer that being fully alive to the possibility of its existence and a knowledge of its obscurity and great difficulty of detection, will have the effect to diminish largely the number of deaths from strangulated hernia, treated as colic or idiopathic peritonitis. The student should be taught where to look for a slight hernial protrusion through the inner ring. He should be told of the changes and liability of mistaking it for an enlarged inguinal gland; of the possibility of the enlarged canal protruding into the abdominal cavity, with but slight or no external swelling; of the necessity of carefully compressing both sides of the abdomen.

These are a few of the essential points to be inculcated that present themselves to my mind. I desire here to speak of another point in connection with the formation of the hernial sack, that seems to be almost forgotten, and that is to call attention to the *importance* of remembering that the portion of peritoneum employed to form it may be represented by a plain membrane about three inches in diameter, more or less, according to the amount of protrusion; and the circumference of this portion of peritoneum would be about ten inches. Now when the sack is formed the fundus is covered with a single layer of peritoneum. The periphery folded and puckered like the mouth of a closed purse would be formed at the inner ring, and the greater the amount of protusion the more folding and the deeper the folds at the internal ring. This crowding of ten inches of peritoneum into the space of one inch would become an important factor in producing strangulation at the inner ring, and the pressure of these folds of peritoneum against each other, under such circumstances, would rapidly result in adhesion, and render the strangulation of the intestine dependent, to a partial extent at least, upon the peritoneal ring so formed. Is it safe, then, to simply divide the outer band of stricture and return the sack and its contents into the abdominal cavity? My own opinion is that in these days of antiseptic surgery when wounds of the peritoneum are not considered dangerous, that the plan advocated and followed by Bangs, of England, Marcy, of Boston, and others, viz: The ablation of the sack should be followed; the fissure in the peritoneum so produced closed with carbolized animal ligatures; the pillars of the inner ring approximated and held in position by the same material, and the external wound closed with antiseptic precautions.

POST-PARTUM POLYPOID TUMORS.

BY HENRY G. LANDIS, M.D., COLUMBUS, OHIO.

[Read to Section on Obstetrics and Diseases of Women, June, 1883.]

The title of this paper is intended to indicate that its subject-matter is concerned with tumors, 1st, which resemble polypi, more or less; and 2d, are found only after delivery. I will further restrict it to labor at full term, since the conditions after abortion differ clinically in some respects, and open too wide a field.

The subject is one of great practical interest. Not infrequently the physician is accused of having left a piece of the after-birth behind—of not completing the delivery. A patient has secondary hæmorrhage or

septicæmia, in the course of which are discharged or removed masses of fleshy or membranous consistence, which the old women or an unfriendly colleague pronounce to be "a bit of after-birth," greatly to the detriment of the attending physician.

I believe that, as a matter of fact, the detention of a fragment of placenta after labor at full term is a rare occurrence, though perhaps the same could not be affirmed of the membranes. I once witnessed a case in which the perinæum had suffered a complete laceration. The accoucheur, apparently excited by the accident, immediately introduced his hand into the womb, and, with a clutch, brought away about one-half of the placenta, leaving the remainder for me to extract, not without difficulty Such ignorant brutality is certainly uncommon, and without it, the placenta is generally, sooner or later, expelled entire. The conditions which, no doubt, are often mistaken for this accident are as follows:

1. Attached fibrinous coagula; the free polypous hæmatoma of Virchow. Slight oozing of blood may take place from a sinus imperfectly closed by a thrombus. The blood clots form gradually, and in somewhat concentric layers, until we have a tumor which feels very like a polypus, and hard enough to bear considerable handling. According to Schroeder, "a peculiar roughness or too great projection of the placental insertion into the uterine cavity appears chiefly to predispose to their formation." He mentions, however, having seen two cases in which there was no question of excessive roughness. The firm structure and laminated appearance of these slowly formed clots are no doubt occasionally misinterpreted by those who examine them hastily. Inasmuch as these blood-polyps have been found under many and varying circumstances, we are at present unable to determine exactly even the principal predisposing causes. A remarkable feature in their clinical history is that for quite a long period, comparatively, their presence is unattended with harm. Our attention is first called to their existence by a sharp attack of secondary hæmorrhage. This may occur in the first week, but has been postponed to the third week after delivery. The hæmorrhage may be immediately fatal, or, if timidly treated, may recur to a dangerous extent. Septicæmia is also apt to follow the hæmorrhage.

Unless the patient succumbs to the first flow of blood there is little to fear from these tumors. Their removal is not difficult, and is usually followed by prompt recovery—which will be expedited by the free use of iodinized intra-uterine injections.

2. A priori, fibrinous clots might be expected to form more frequently when a fragment of placenta adheres to the uterine wall.

The authors who mention the subject seldom detail cases, and I am not sure whether direct observation or inductive reasoning has guided them in their remarks. There is at least a possibility that some cases have been confounded with, or rather wrongly taken from, the next two classes of which we will speak. Courty[1] figures a blood polyp attached in this manner, but if the cut is approximately correct there is room for doubt whether the attached mass is placenta or hypertrophied decidua. Admitting the occurrence as probable, but much more rare than its comparative prominence in books would warrant, we have a second form of polypoid tumor consisting of a mass made up of placental tissue and clotted blood. This form causes the same symptoms as in the mere blood polyp, but is both more difficult to remove and more dangerous to life.

3. The decidua vera or scrotina may become in part detached during the labor. Small strips of mucous membrane are thus left dangling from the uterine walls. This condition directly favors the stalactitic growth of blood-clots, and is probably the most frequent cause of their formation. Winckel[1] gives full details of a case of this character. Dr. Munde's case reported in March, 1883, (*Am. J. Obst.*, and elsewhere), appears to have been similar. When these tumors are removed, the laminated structure of the clot, interspersed with shreds of decidual membrane, are very liable to be taken by a careless observer for placental tissue. Such mistakes are not likely to be made by experts, but I speak of things as I find them. Thus we see that we may have polypoid tumors composed of blood, either formed in a normal uterine cavity or connected with placental or with decidual fragments.

4. A fourth form is thus briefly noted in Barnes[2]: "C. Braun (1851) describes the *placental polypus*. This results from the remains of the placenta, consisting of hypertrophied decidua, which, projecting into the uterine cavity, forms a polypoid mass." This, it will be noted, is a very different thing from either retained placenta or prematurely detached, but otherwise normal decidua. It results from the hypertrophy of the decidua scrotina, or vera, due to inflammation or intense localized hyperæmia. I have not had access to the original paper of Braun, nor have I been able to meet with the record of any other cases. A detailed report, therefore, of two cases observed by myself may be of interest:

CASE I.—Mrs. F., æt. 27, third pregnancy. Labor continued for eight hours, nothing noteworthy occurring until after the birth of the child, a male weighing ten pounds. The method of Credè was then instituted, but a half hour elapsed before the placenta was finally shot out of the vulva. The membranes resisted considerable traction, and required to be much twisted before they could be withdrawn. The afterbirth was then carefully examined. It was of irregularly oblong shape, and "battledore." One or two small patches on the maternal surface presented the appearance of recent adhesion. On the membranes, about an inch from the placental edge, was a patch one and one-half inch in diameter, of roughened and flaky surface, and stained in spots by hæmatin. There was no history of inflammation during pregnancy, notwithstanding the presence of plain evidence of adhesion of both placenta and membranes. The womb was well contracted, and the patient comfortable in all respects.

Convalescence was uninterrupted, the patient being allowed to sit up on the eleventh day. On the even-

[1] Dis. of Uterus and Am. Ed., p. 675.

[1] On Child-bed, p. 157.
[2] Diseases of Women, second American edition, p. 689.

ing of the twelfth day (post partum) she suddenly, while nursing the baby, suffered a copious hæmorrhage, and when I arrived an hour later, was still leaking, with a rapid pulse and exsanguined appearance. An examination showed the rectum to be so loaded with fæces as to prevent access to the os uteri. Knowing this to be a not uncommon cause of secondary hæmorrhage, I at once administered an enema with prompt effect. On then introducing the finger into the womb I found that it contained a mass of firm tissue with polypoid knobs—but no blood clots. At the lowest end of the mass I found a slightly detached edge, and with a prying and sawing movement of the finger, succeeded in detaching the greater portion of it, until I could no longer reach to a sufficient distance. By this time, the condition of the patient demanded a cessation of hostilities, and having injected into the womb a strong solution of iodine, she was allowed to rest until the morning. No hæmorrhage nor pain during the night. In the morning, assisted by Dr. Loving, I proceeded to remove the mass, which had shrunk in size, since its partial detachment, and was attached like a veritable polypus at the fundus. The placental forceps brought away the greater part at one seizure, but a small fragment was unavoidably left for spontaneous detachment. Intra-uterine and hot water vaginal injections were used from this time, and the patient entirely recovered with the following remarkable diversions, viz.: A chill occurring exactly one week after the hæmorrhage, another one week after that, and a third slighter chill just one week later. The free use of arsenic finally controlled them. It may be added that she had been a frequent sufferer from ague from her youth up.

To return to the tumor. While dissecting up the mass from the uterine wall, the conclusion that it must be a retained cotyledon of placenta was forcibly present. This was negatived by the careful inspection previously made of the placenta, and also by the density and comparative thinness of the mass. This also militated against the supposition of a "*placenta succenturiata.*" Doubts were resolved when the mass was removed. Macroscopically it was unmistakable uterine mucous membrane, although over a half inch in thickness.

Being referred to Dr. A. M. Bleile for microscopical investigation, he reports:

A hardened and stained section exhibits:

1. And principally, connective tissue with large number of cells.
2. A few tubules.
3. Blood vessels of respectable magnitude.
4. Free surface, covered by columnar epithelium.

The whole giving the impression of uterine mucous membrane, in which the tubules are widely separated by embryonic connective tissue.

We have, then, here a case in which a relatively enormous hypertrophy of the decidua took place, resulting in a mass too large to be disposed of in the usual and physiological manner during the process of involution. That the cause was inflammatory may be inferred from the adherence of the fœtal envelopes, notwithstanding the apparent health of the mother during gestation. That the predisposing cause was malaria is suggested by the subsequent history.

CASE II.—Mrs. D.. æt. 23, primpara, delivered Feb. 12, by a midwife. By a curious coincidence nothing retarded convalescence in this case until the twelfth day after labor, when a sharp hæmorrhage occurred. Unfortunately the midwife did not appreciate the possibilities of the case, and it was not until after three days and repeated hæmorrhages that I was called. I then found in the uterus several fibrinous polypi, which, when removed, were found to contain small shreds or flakes of membrane. After their removal the posterior wall of the uterus was noticed to be roughened or rather nodulated, and, a fragment being removed, proved to be mucous membrane. The midwife insisted that the placenta had been removed entirely, without difficulty, and by the method of Credè. As in the former case the condition of the woman was so low that I was compelled to defer further proceedings for the time, using hot water copiously in the interval. At a second sitting I succeeded in removing further bits of decidua, after which the uterus gave no further trouble, as the woman advanced to complete but slow recovery. For several weeks the extreme bloodlessness of the patient had to be combatted, and this was followed by œdema of the lower extremities with phlebitis. During the course of this she had many chills, alternating with fever. To make a diagnosis of malarial poisoning under such circumstances is somewhat hazardous, yet I am inclined to think that a malarial element of causation existed also in this case.

MAN ACCORDING TO NATURE.

[Address before the District Medical Society of the Eleventh Congressional District of Ind., and published by request of the Society].

BY WILLIAM H. SCHROCK, M.D., DECATUR, IND.

The laws governing our physical origin and development are so numerous and so imperfectly understood, and still less perfectly obeyed that we exclaim how fearful and wonderful the result.

With all the recorded facts of the past, scientific men of this age ought to occupy a higher plane of action, in defense of nature's laws. Man's spiritual nature has been so clearly taught, and the laws for its progressive growth till its final consummation in perfection at death in Christ so well obeyed, that the believer in and obeyer of the Bible furnishes the world with the highest and most perfect psychical type of man.

For elucidation and verification of this statement we refer you to those individuals, communities, states and nations that receive the Bible as the word of God, and who accept and obey its legitimate teachings, in contrast with those individuals, communities, states and nations that reject the Bible as the word of God, and deny and disobey its teachings.

We desire to direct your attention, to-day, to a brief consideration of nature's laws, so far as they pertain to our origin and development from elemental life to its final consummation. In so doing, we shall avoid whatever might lead us into a dissertation upon the inherent force of cell life or the physical

laws of our being, but shall confine ourselves to the investigation of the laws of our physical being.

Consequently, we have these three propositions to submit:

1. A perfect physical being can only emanate from perfect germ elements.

2. Perfect physical growth results only from full and complete obedience of all the pertaining laws.

3. A perfect being only can completely fulfill the mission of its creation.

As we can have a round body only when every point of its circumference is equidistant from its center, as we can have a straight line only when every point of it lies in the same direction, so we say a perfect physical being can be developed only when we have perfect germ elements, because of the inherent property given each of these, however unlike in nature and incapable of variation.

Since we have infinite deviations from a round body or from a straight line, so have we deviations from perfect germ elements, producing results varying from the slightest abnormalities to the greatest monstrosities of the human organization.

The difference may exist in the nervous, muscular, vascular, glandular, or osseous systems, separately or in combination in their primal organization, or may manifest the defect psychologically only. It does not necessarily follow that every perfect germ element will produce a perfect being.

A perfect germ in its development will follow nature's law perfectly, providing its environment be in keeping with its organization and no extraneous causes interfere.

What these extraneous causes are, their influence, and how to eliminate them is the proper function of the educated physician and philanthropic scientist.

Recognizing the infinite wisdom of creating an intelligent being with perfect freedom to do as he may, subject, however, to the consequences of obedience or disobedience of the laws given for its control, it becomes us to know these laws, and, knowing, to obey them, and impart this knowledge to others. Until those who make a pretension of knowing the intricate laws of cell development, from its initial existence to its last stage as a living organism, shall by their example demonstrate that their belief and knowledge are in harmony; it cannot be expected that they who are ignorant of these developmental laws of cell growth will do much for themselves contrary to the desires of their grosser natures. As these laws are better understood and obeyed, elimination of whatever is detrimental, and the retaining of whatever is advantageous to the production of a being more nearly perfect, we shall by unequal steps of approximation, in the course of time, reach what is now capable of theoretic demonstration—a perfect physical and psychical man.

This approximation cannot be by regular progression, for its advance will be in subjection to the tide of public opinion as wrought upon by the variable forces of positive teachers and cotemperaneous circumstances. When we seek for verification of this statement in the highest civilization that has existed, we are, from a superficial examination of presented facts, and statement of facts, startled at the revelation, and led to doubt the position taken. But from a more deliberate and exhaustive examination, we are logically brought to a most encouraging result. Finding the very highest type of mental, physical and moral development of man wherever the laws of nature were obeyed, however ignorantly.

Wherever and whenever the hygienic laws of the Mosaic dispensation were obeyed, there and then do we find marked progression toward a better physical man. "Nature's edict," "The fittest only shall survive," produced wonderful results in eliminating the halt, maimed, and diseased from the first peoples of all lands: but not so in the same degree in the older nations and better provided for people; when disease in its multitudinous forms has been more successfully combatted by the competent physician; its victims rescued from premature death, and their lives prolonged to *inflict* their ills upon their *unfortunate* progeny. We have health boards organized in nearly all of our States and larger cities to warn and forearm the people against epidemics of contagious diseases and epidemics modified by local causes, and most gratifying results have been obtained. Many noble acts of self-sacrifice are on record, performed by our enlightened sanitarians.

But when the time lost, money expended, affections severed, homes made desolate, and deaths recorded, are totalized and set opposite to the result of the unions made through the sanctity and shielding power of the marriage vow, of the alcoholic, intemperate, phthisical, scrofulous and syphilitic persons in families, the results of the former sink into insignificant nothingness. And what is being done by the physicians, the people's health conservators to educate and warn the uninformed laity of the devitalizing, decimating results of these diseases as they are transmitted by father to child as its chief heritage?

In view of these things, we have no reason to be horrified at the seeming cruelty of the Roman father when called upon by the midwife, as she coldly points to the new born infant just laid upon the ground awaiting the father's order. If the father finds the child to be a likely one, he says to the midwife, "tollere infantum," and the child is straightway cared for. But if the child be defective in its physical organization, the father exclaims "exponere," and the child is left to perish. Thus by elimination of defective elements by this cruel and diabolical process the Roman Empire was enabled in a great measure to obtain and retain a very high type of physical man.

Had they studied the laws of physical development and heeded the divine law so plainly taught in the Mosaic dispensation, far better results would have been secured than by the fearful crime of murder. In this mode of renovating and keeping the physical man up to its highest standard, however cruel and inhuman, they were far in advance of their illustrious predecesors. As knowledge spread disseminating the beneficent blessing of greater revelations of nature's laws, these modes of elimination ceased. As population spread over Western Europe, frontier life, the

many wars waged, the want of proper care of weak children, and the exposure of enfeebled adults, were the renovators of the human family, and in a very great measure preserved and advanced the standard of the physical condition of man.

In the progressive advance of national development, greater care on the part of individuals, the establishment of eleymosynary institutions and hospitals, the advance in medicine, all have so nurtured the abandoned, provided for the maimed, and suppressed the active manifestations of the constitutionally diseased, that they are permitted and enabled to form marriage unions resulting in progeny, defective, dependent, and to be cared for as themselves.

These, however, are not the only obstacles to a pure and perfect development of physiological man. We quote from Dr. Kidd, author of "Laws of Therapentics," who relates a history of the course of a disease in a family, the effect of which is to strikingly illustrate if it does not demonstrate the transmisibility of Bright's disease A woman, two of whose brothers had died of this disease in early manhood, who herself died of it aged sixty, was the mother of twelve children, seven of whom died of it, and two grand-children are now afflicted with the disease. If the two brothers and one sister were the only members of the family, what a mortality! Of the second generation we have seven deaths out of twelve children, a mortality of 58⅓ per cent. In the third generation two members are already victims and may be soon gathered as early fruits of an injudicious marriage. We draw from our own observation the following, to illustrate at least what may occur from a scrofulous diathisis. Mrs. F, mother of six children, whose maternal parent had scrofula, had before her marriage several glandular abscesses about the neck and great sympathetic disturbance of left eye. The husband, a man of splendid physique, five feet eleven inches, sanguine temperament, and weighing about one hundred and ninety pounds; never from youth to present time has been sick, save an attack of remittent fever in the fall of 1865. The two first children died in early infancy after repeated scrofulous abscesses of head and neck. Soon after the birth of the second child the mother lost the use of the left eye. One child was born blind in one eye and lived only six months. A third child was born blind in one eye, lived to be nearly four years old and died from exhaustion resulting from repeated abscesses. Two only of six children reaching adolescent life in reasonably good condition but not free from scrofulous abscesses.

For the hereditary effect of alcoholic intemperance permit us to quote Pultzel, page 63: Father was a periodical drinker. By his first wife (who was healthy) he had four children, two daughters, one of whom was insane and the other imbecile (neither of these had children) and two sons, one of whom had an epileptic child and one an insane child.

By the second wife (also healthy) he had three sons; one died of epilepsy; one was epileptic and had an insane child. The third son had seven sons, all of whom had fits in infancy; one a confirmed epileptic; one suffered from epileptic insanity. Here we have a brief history of seventeen children of the first and second generation, and only two of whom are put down as healthy, free from disease traceable to the periodical use of alcohol by the father. Had the two healthy mothers been addicted to periodical drunkenness, what would have been the result?

Thus have we briefly brought before us the theoretical and demonstrated instances verifying the correctness of the proposition, that a perfect physical being can only emanate from perfect germ elements. What a vast field for the practical utility of preventive medicine, to eliminate defective elements by the dissemination of demonstrated facts; facts which, when recognized and their lessons heeded, shall bring incalculable physical wealth, indescribable joy, and a hearty acquiescence to all the laws governing ourselves and all about us.

The second proposition, "A perfect physical growth results only from full and complete observance of all the pertaining laws," is so evidently axiomatic that an effort to demonstrate its truthfulness would becloud its clearness. Hence we will consider the third proposition, viz: A perfect being only can completely fulfill the mission of its creation. This proposition might be negatived by the statement that there is no perfect physical being, which is true to a very large extent, but not wholly so. If it were so, it does not invalidate, but rather strengthens the verity of the statement. It also demonstrates that the principles of the first two propositions have not been obeyed; and hence the necessarily imperfect result.

Were we to travel outside the realms of man's physical creation to demonstrate the position taken, there is none to deny that an imperfect locomotive can not completely fulfill its mission. There are but few persons, if any, but believe that any malformation of an internal or external character will modify or retard one's ability to acquire accomplishments or perform labor. Hardly can we hope to find an intelligent person believing that a supernumerary finger retards the social and mental progress of its unfortunate owner, and yet it will, and does. I have known even a double thumb nail on left hand to so annoy a girl of fifteen years, that she never could acquit herself in class recitation equal to her ability. History informs us that our most successful men and women have been very high types of physical organization, have very closely kept the laws of physical growth, and consequently have quite well, though not completely, fulfilled the mission of their creation,

To accomplish these most desirable results we suggest that the conservators of the people's physical well-being improve every seasonable opportunity to bring this subject before the lairty, that they may think of it, discuss it, and ultimately adopt its teachings, so that marriage alliances shall be entertained and consummated by the parties most nearly approaching a perfect standard of physical and mental development, being free from the contaminating influences of constitutional diseases.

We certainly are not responsible for the pre natal influences which circumscribed our physical and mental condition, diseased or healthy. But we are

certainly responsible for circumscribing the mental and physical condition of our children. Most wisely have the several States of this grand nation acted in part, upon this very important feature of man's physical growth. But their authority has not yet been exercised coextensive with their duty. While they rightly and justly prohibit the marriage of imbeciles, idiotic, insane, and blood-relatives, to the fourth, and in some States to the sixth degree, we have no doubt of the prosperity and preservative need of prohibiting, by statuatory enactment, the marriage of phthisical, scrufulous, and syphilitic persons.

MEDICAL PROGRESS.

LEMON-JUICE AND OYSTERS. Paris Correspondent *Lancet*, June 30, 1883.—M. Cortes, a distinguished microscopist and biologist, decides from his researches, that the practice of using lemon-juice with oysters is not only a matter of taste, but that it also has its utility, as lemon-juice has the property of destroying the animalcules which infest the stomach of the oyster.

METALLOTHERAPY IN OBSTINATE HYSTERIA. RAPID CURE BY ALUMINUM. V. BURG and J. MORICOURT, *Comptes Rendus*,, etc., *de la Societé de Biologie*.—This is a case the details of which are given at length, of a girl æt. 20, affected with hysteria of four years' standing, which manifested itself by a constant barking like a dog, with absolute anæsthesia of the left side and complete abolition of taste and smell. The abdominal muscles were in such a state of atony that it was impossible to evacuate the bowels except by enemata. The body in various places was affected by bands of redness with an indurated base, which, on disappearing, left behind them a pearly whiteness, like the marks in pregnancy. The patient had been treated by several physicians, Charcot among others, and had used all the antispasmodics—arsenic, electricity and hydropathy. For three consecutive months she had been seated on the electrical stool one or two hours daily, and for two years she had been douched winter and summer, without regard for the menstrual periods * *

She was submitted to the test of metalloscopy, which resulted in a response to aluminum, and a solution of sulphate of aluminum (10 drops of a solution of 1-200) was injected under the skin of the left thigh, which in 20 minutes removed all traces of anæsthesia. After this result was obtained, a large plate of aluminum was applied to the left leg. In a few days sensibility became greater than normal in the greater part of the affected side. Injections at the larynx of 5 to 6 drops of the solution, produced in five months a return of the sense of taste and of sensibility to the tongue and palate. Consequently the following treatment was ordered: 1. Permanent applications of an armature of aluminum around the neck, left arm and thigh. 2. To take every day one to two pills containing 0 gr. 03. cent. of sulphate of aluminum, with the result of, two days later, the complete disappearance of the barking, and a regular action of the bowels. The case now went on rapidly to convalescence, with but one drawback—two of these pills being taken one day, produced a diarrhœa. In 28 days the patient was discharged cured, being relieved of all her nervous symptoms, and not only had the red patches entirely disappeared from the skin, but the old stigmata were almost entirely effaced. During the treatment, the strength of the solution was increased to 1-100, and the patient increased in weight accordingly.

ON IODOFORM PLASTER. DR. A. PAPE and Apothecary FISCHER in *Der Praktische Arzt* for July, 1883. Not being satisfied with the use of iodoform collodion, or iodoform ointment as neither of them permit a constant and long-continued application to the skin, have prepared two plasters: First, emplastrum iodoformii fortius. ℞. Iodoformii pulv. 100.0. Empl. adhæs 200.0. Empl. Plumbi Spl. 200.0. Second, empl. iodiformii mitius. ℞. Iodof. pulv. 50.0. Empl. adhæs 300.0. Empl. plumbi spl. 300.0. These plasters adhere well, and can be removed without much difficulty. Dr Pape gives several cases of acute and chronic local glandular swellings, with pain, where the plaster gave much relief after other preparations of iodoform had failed. The plaster remained on for from five to six days.

The empl. iodoform mitius is applicable to the skin in such conditions as frost-bites. Dr. Pape refers to a case of pleuritis exudative which is still under treatment, and in which already, after the application for eight days of the stronger plaster, total resorption of the exudation has taken place.

CANNABINUM TANNICUM is a glycoride prepared from the semen Cannabis Indicæ, by E. Morek, of Darmstadt (*Der Praktische Arzt*, July, 1883), and is recommended as a mild and safe hypnotic which has no disagreeable after-effects. It has been used by Dr. Hiller in a number of cases of sleeplessness where there was no special pain, mostly in phthisical cases who had previously taken morphia and where sleep during the whole night was produced by an evening dose of 0.5 gram. Only one patient complained, on awaking, of headache and discomfort, and in this case it was doubtful as to whether they were not due to indigestion. No vertigo, indigestion or effects upon the pulse, or respiration had been noticed in any other of these cases. The number of cases in which this drug has been tried is, so far, very limited.

The dose is from 0.3 to 0.5 grams, and the most agreeable form of administration is the powder mixed with sugar. The taste is not disagreeable—slightly astringent, like tannic acid. The smell is like rum.

A CASE OF COMPLETE ADHESION OF THE TONGUE TO THE FLOOR OF THE MOUTH.—M. Duplong communicates this case to the Société de Chirurgie de Paris, which is reported in its Bulletins and Memoirs, July 5, 1883, for the purpose of eliciting discussion as to the best means of relieving the affection. It occurs in a child aged two and a half months; the parents have no vices of conformation,

but the grandmother had an ectromelia of the right hand, which is reproduced in this child; also a difficulty in speaking, the cause of which was not made clear. The child presented a pitiful appearance, with a very notable disproportion between the superior and inferior maxillæ, while the lips and superior maxillary were well formed; the inferior maxillary had undergone an arrest of development. That portion of the inferior maxillary bone which corresponds to the incisor teeth was less elevated than at the sides; the soft parts of the upper hyoid region are less thick than in other children of the same age, and the tongue, adherent throughout its deep surface to the floor of the mouth, is very much diminished in size towards its point; it is continuous anteriorly with the gingival mucous membrane which covers the incisive portion of the bone, so that there is no appreciable line of separation. Outwards and backwards from this point a deep furrow is plainly seen bordered by the lateral portions of the tongue. The finger placed over what should be the tongue feels a marked diminution in size of the anterior third of the organ, which is there reduced to a simple membrane, while posteriorly it preserves a thickness which should be sufficient assurance of its functions were it liberated from its attachments. It is felt contracting during the efforts at deglutition, and the lateral portions in the posterior, two-thirds of the tongue thus show that they are provided with a muscular texture; but it is very difficult to know exactly if, towards the middle of the tongue, the coalescence with the floor of the mouth is absolute. In the efforts at sucking the whole of the supra-hyoid region raises itself and suction becomes impossible. The child can only be nourished by means of the spoon, and its alimentation is curiously interfered with by the suffocation produced during deglutition.

As to the ectromelia of the right hand, inherited from the grandmother, it consists in an atrophy of the thumb, in the absence of two phalanges of the index, the absence of the medius, and the reduction of the ring finger to two phalanges; the little finger alone is perfect.

M. Duplong proposes to attempt to relieve this condition by using the thermo-cautery cautiously and separating the parts with the spatula or finger. In the discussion which ensued it was thought that unless a mucous covering was provided for the liberated surfaces, there would be a readhesion of the parts, and it was a question as to where that mucous covering should come from. M. Verneuil proposed to take this covering from the upper surface of the tongue, laying it back over the liberated portions, and, at the same time, piercing the tongue with sutures so as, by drawing on them, to give the tongue a cylindrical shape. M. Mare Sée suggested the taking of the mucous membrane from the inner surface of the cheek in strips, to be left adherent to the cheek until after their cicatrization on the tongue itself.

Note on Disinfectants.—Dr. W. E. Buck writes: Most practitioners must have often realized the inefficiency of disinfectants in allaying the fœtor of cancerous ulcers an annoyance which sometimes troubles patients even more then the pain, or the thought of death. I have used the whole round of disinfectants for cancerous ulcers, but all have failed in allaying the fœtor and keeping the ulcer clean. The ditinfectants tried were carbolic acid, sanitas, terebene, resorcin, creasote, boroglyceride, chloride of zinc, charcoal, etc. After failure with these, I tried a saturated solution of hyposulphite of soda added to an equal quantity of water, and found it exceedingly efficacious. The ulcerating surface was well syringed and washed with the solution, and was then covered with rags steeped in the solution. The granulations were kept clean, and the fœtor was well kept under. Most disinfectants seem to lose their virtue after a few days' application, but I have used this one for months in the same patient with continuous good effects. It is cleanly, has no smell, does not stain, and is very cheap.—*British Medical Journal.*

The Presence of Bacillus Tuberculosis in an Abscess near the Anus.—Dr. Robert C. Smith writes: Six months ago a young clerk aged 21 came under treatment for hæmoptysis and other signs of phthisis. After about three months' treatment he became strong enough to resume his employment, at which he continued up to the commencement of this month. I saw him on the 5th, when he was suffering acutely from an abscess in the neighborhood of the anus; and, fearing lest it might burst into the bowel and give rise to a painful blind internal fistula, I opened the abscess at once and let out a quantity of thin, curdy, fœtid pus. A microscopic examination of this fluid by a half-inch object-glass, after the usual process of staining, revealed the presence of great quantities of well-marked typical tubercle-bacillus. Now, the presence of these organisms in this situation is interesting, as they tend to throw some light on the well-known connection between fistula and phthisis.—*British Medical Journal.*

On Cystotomy by a Modified Lateral Method in Certain Cases of Enlarged Prostate.—Mr. Reginald Harrison, F.R.C.S., Surgeon to the Liverpool Royal Infirmary, writes:

"Within recent years, I have had cases where it has been found expedient to make an opening from the bladder into the perinæum, in preference to other measures, the usual means of relieving obstructed micturition, or the consequences arising therefrom, having failed or proving insufficient.

"I may premise by stating that, apart from those cases of obstruction complicated with circumurethral abscess, no such proceeding has been undertaken on the sole ground that catheterism was impossible, though some difficulty connected with the performance of the operation has, with other circumstances, usually been present.

"The selection of a method for opening the bladder should have reference only to the object to be attained, or the contingencies that may arise. If, for instance, we desire merely to introduce the finger into it, as a preliminary to extracting a small stone,

the median operation answers perfectly; while, if a larger stone, or an unknown quantity of anything, has to be dealt with, the lateral incision will, as a rule, be preferable.

"It has been advanced by those who favor the median incision, which is practically an urethrotomy, that it is both simple and safe; its admitted disadvantage lies in the small space it provides for manipulating and extracting; while, on the other hand, the lateral incision, though affording more room, is considered to be attended with an increased risk and a greater degree of difficulty, so far as its performance is concerned. The median operation need not necessarily involve anything more than the opening of the membranous urethra. The completed lateral operation further includes the division of structures constituting the neck of the bladder; and it is to this part of the proceeding that any increased risk or difficulty is to be attached.

"A little reflection shows that it is possible to closely assimilate the lateral with the median operation; that is to say, to dispense with the incision, not to the staff, but along the staff, should it be found, on exploration with the finger, that the additional room which the latter part provides is unnecessary for the object in view. It need hardly be said that this modification of the lateral method, where it is found, on digital exploration, to be feasible, frees the operator from executing the only portion of the operation to which any increased risk is attached; while, on the other hand, he has the consciousness that, should it turn out to be necessary, he can, by the completion of the deep incision along the staff, avail himself of all the advantages which are conceded by surgeons to the lateral method of opening the bladder." Mr. Harrison illustrates his method by the description of a case.—*British Medical Journal.*

ALBUMINURIC RETINITIS OF PREGNANCY.—Dr. Ryerson, of Toronto, writes:

"Mrs. E., aged 22, was referred to me by Dr. Temple on June 1st, 1881, with the statement that the urine contained a large amount of albumen. The patient stated that her sight had been failing for about a month. She said she could see the sides of an object, but not the center; and complained of flashes of light in the dark. She had fronal headache, sometimes severely. She had no pain in the eyes. There was a great deal of nausea and vomiting. She was in the fourth month of her first pregnancy. With the right eye she saw fingers at five feet, and read 16 Jäger; with the left she saw fingers at three feet, and read 20 Jäger. With the ophthalmoscope I observed in the right eye a well-marked stellate arrangement of deposits about the yellow spot, with numerous patches scattered about the retina. The optic disk was somewhat swollen and indistinct in its outline. The appearances in the left eye were very similar, with the addition of numerous small hæmorrhages in the lower half of the fundus.

"Dr. Temple informs me that shortly after this she was seized with convulsions, and had a miscarriage. She made a good recovery, and when I saw her again on August 4th the swelling of the optic disk had greatly diminished; the scattered patches were less marked, but stellate patches in the region of the macula were about the same as when first seen. In the right eye two veins apparently contained thrombi. The vision was with the right eye, $^{20}/_{50}$, 16 Jäger; with the left eye, $^{20}/_{50}$, 16 Jäger. She could manage to write a letter. From Dr. Temple I learn that she regained good vision, but did not myself see her again. In a few months the unfortunate woman became pregnant again, although warned of the danger; convulsions supervened, and in one of them she died.

"REMARKS.—It would be of considerable interest to learn in what proportion, and in what class of cases of albuminuria of pregnancy, retinitis occurs. That it does not necessarily occur, I know, having attended some years ago two cases in which there was no complaint of trouble of vision. One case, a woman of about thirty years, in her fourth pregnancy, made a good recovery. The other had uræmic convulsions, and died. I did not use the ophthalmoscope, but relied upon the patient's statements, the cases having occurred in my pre-ophthalmoscopic days."—*British Medical Journal.*

ON A CASE OF OBSTRUCTIVE JAUNDICE OF AN UNUSUAL NATURE.—H. Mallins, M.B., etc. *Lancet*, June 30, 1883. An officer of the Indian army was attacked October 13th with mild intermittent fever, but with a good deal of nausea and vomiting. Two days subsequently a decidedly yellow tinge of the conjunctiva was noticed, and a week later well-marked jaundice was developed, with its usual accompaniments of whitish stools, dark-brown urine, etc. The appetite was not much impaired, but the ingestion of nearly every kind of food procurable was attended with so much subsequent nausea that the amount of nourishment taken was extremely small. Three weeks after the full development of jaundice, yellow vision and intense irritation of the skin, particularly that of the lower extremities, were complained of. No enlargement of the liver could be made out; very slight tenderness, on pressure over the region of the gall-bladder, was the only local indication. Emaciation became so marked, that after trying change of locality he applied for and obtained furlough to Europe. On January 18th, at Bombay, he had occasion to go to the closet, and while inspecting the excreta discovered a large ascaris lumbricoides, apparently dead, one end of its body to the extent of half an inch being of a deep green color. The very next day the stools began to exhibit a slight amount of the normal bilious hue. Ten days after embarkation their color was quite natural, and before landing in England convalescence was satisfactorily established.

A CASE OF MONSTROSITY. Dr. Raverty describes the following case of a sireniform fœtus:

"I was called to attend Mrs. D., in her fourth confinement, on May 9th, 1883. On my arrival I found the water had come away about twenty minutes before, and projecting from the os externum was a fleshy mass so unlike any usual presenting part of the

fœtus to the touch, I was quite at a loss what to make of it. However, another pain coming on solved the riddle at once, the feet and leg or legs being expelled; and in a short time the shoulders and head followed. The child was alive, and continued so for eight hours. The mother made a good recovery. From the head downwards to about midway between the sternum and the umbilicus it was in every respect well formed, and to outward appearance perfectly natural. From about that point the following particulars were noticed: There were no projections at the usual site of the crests of the ilia. The abdominal cavity was small, and seemed to be almost destitute of contents. The genito-urinary organs were represented by a small round aperture surrounded by a slightly elevated fleshy ridge (represented by a lower dot in the figure). The limbs were enclosed in one continuous fold of integument, although the bones could be felt quite separate underneath; and in front there was a slight depression marking where the division ought to have been between the limbs. There was no separation of the buttocks; in fact, there was very little of the usual projections at this point, and there was no anal orifice. The feet were joined together at the heel and partially so at the center of of the foot, but the toes were well formed, in the usual number, and free. I would have liked a *post mortem* examination, but the parents objected. The mother said she had only gone eight months. There was no history of a fall or fright, except a bad dream about the fourth month.—*British Medical Journal.*

The Political Powerlessness of the Medical Profession, its Causes and its Remedies.—This is the title given to the annual presidential address before the Birmingham and Midland Counties Branch of the British Medical Association, by Balthazar Foster, M.D., F.R.C.P., as reported in the *British Medical Journal* June 30, and it would well repay the reading to print it in full in these columns. A political doctor striving to make professional capital out of his relations to party and party feeling is a different thing from the public-spirited medical man interested in the welfare of his locality, State, and general government; whose education fits him for a consideration of many of the political questions of the day. Does not his position in the community also demand that he express his views freely? He may see his member, for instance, who was perhaps a patient, and who was certainly dependent, in a measure, upon his vote and his influence, if he chose to exert it; make a record in Congress upon some sanitary question affecting the whole country, or in cutting down appropriations for institutions that are the pride of the profession—in a way that ought to make him ashamed of his declining to mix in political matters for fear of being considered like the doctor who is making capital out of his politics.

Dr. Foster reviews the medical acts of Parliament—the necessity for medical representation in the House of Commons, and cites the Cruelty to Animals bill as an example of the character of legislation. "A sickly sentimentality, half-sister to that æstheticism which made a large section of society contemptible to healthy and robust manhood, was allowed to influence the legislature at the expense of knowledge, and in opposition to the protest of a profession, tender, trusty enough to hold in its daily charge the lives of our dearest and best, but yet, forsooth, so full of devilish cruelty that it could not be trusted with a cur or a cat." He refers to the evils which will accompany the Practical Abolition of the Contagious Diseases Act, and feels anxious that it may be followed by one encouraging anti-vaccination. "As a class, we are too timid and too reticent; we fail to take our due share in the public work of the communities in which we live. The nature of our daily work is to many of us so absorbing in its interest, and demands so much of our time for calm, careful reflection, and for scientific investigation, that we turn, with the dislike of philosophers, from the noise and dust of the forum. With some of us, probably, there may be a lurking fear that pronounced opinions on political and social questions are apt to injure a doctor in public estimation, and so to lessen his professional influence and his pecuniary profits. In the sad quietude of the sick-chamber, where the finer issues of life and death have to be weighed, the brawling politician would jar on the sensitive nerves of the sufferer, truly; but we need not be brawling politicians, nor need we allow political questions to so occupy our thoughts as to interfere with that absolute concentration of mind on the case of every patient, which is essential to the most perfect performance of our work." "In my experience, personal and collected, I have been able to find few, if any, examples of permanent injury to a medical man, from any manly and proper action in his capacity as a citizen. I have heard of cases of failure attributed to political partisanship, and also of cases of success, both of which could be easily explained on ordinary personal grounds." "The public do not trust a man in illness because he agrees with them in politics, it is because they have confidence in his professional skill and integrity; and if in any case the scale of favor is turned against us by so slight a thing as political preferment, believe me, the balance of esteem between the patient and the doctor is not worth preserving."

"At the last general election, while lawyers stood by scores, not a single medical practitioner went to the poll in the whole of England. In other nations this is not so. In Germany, the world-renowned pathologist, Virchow, was the leader of a powerful party in the Prussian and German Chambers. Among the deputies of France, one of the most powerful leaders and the probable successor of Gambetta is a doctor; and till recently a distinguished physiologist held a ministerial portfolio. In Italy the same conditions hold good, and at the last election, seventeen medical men were elected by the people for parliamentary work.

"We, as a profession, know the wants, the sufferings and the sorrows of the people more intimately than any other class, and by our daily work in the homes of the poor, we are trained to observe their social and sanitary needs. It is always a calamity to a state when any learned and respectable class of its

citizens abstains from the exercise of political functions. It is a greater calamity when they do so in the face of law-making on which they are capable of wise counsel. As a class, we stand almost alone in extent and thoroughness of scientific training. We are the only body wise in all the mysteries of the new knowledge. As the power of other learned callings wanes; as the proud predominance of wealth is lessened, it is scientific intelligence that must gain in power. But power will not come to those who stand aside and look on, either cynically or timidly, at the strife of parties. We must hold ourselves like men, willing to take our share in the struggle. We must remodel our institutions, we must organize and consolidate our profession, and infuse into our ranks the self-respect and dignity that come from discipline.''

INSTRUMENT CASES.—In a long and interesting article by Dr. Landolt, in *Archives d' Ophthalmologie*, for July and August, in which he details carefully the instruments required in surgical operations on the eye, he makes reference to the box or case in which instruments are kept, which, in its language, is equally applicable to all surgical instrument cases. He says: "Formerly (and frequently to-day) instrument cases were generally of wood, covered with leather, and lined with velvet. We cannot deny that a box of that character, handsomely finished, in Turkish morocco, ornamented with metallic corners and plates, lined with some rich material of bright color, with rows of glistening instruments arranged in close order, is a very pleasing sight (to the surgeon). But this bright picture has its shadows; the handsome velvet retains dirt too readily, and the luxurious interior of the box is absolutely opposed to a radical cleaning, and to an antisepsis in harmony with the doctrines of modern surgery. The simple box of wood has now come into vogue, and we have seen them of such handsome wood and superior workmanship as to rival their elders. They are made of walnut, mahogany, ebony, and rosewood. Walnut is the most solid, ebony the handsomest and dearest. Mahogany is very solid and gains in beauty with time. Foreign woods are sold by weight. Merchants frequently soak their woods in water to increase the weight and price to the detriment of their value. A wooden box should be sufficiently well made to be plunged with impunity into an antiseptic solution, and to sustain thorough cleanings with brush and sponge.''

THE TRIBULATIONS OF A COUNTRY OBSTETRICIAN.—Under this title a Dr. Pierre gives, in the *Gazette Med. de Picardie*, a very amusing account of his experiences. In one of his cases, where he assists at the birth of a child born out of wedlock, the mother of the mother is highly indignant, not at the condition of her daughter—that is a small matter—but that the mother of the father is not present at the birth, an indignity which she could not brook, but which was finally condoned by the arrival of the offending party. One case can well be given in his own style: "I was on duty at the Hospital Saint Antoine. One night, about one o'clock, I was awakened to receive a patient. She brought with her in her arms an infant that was nearly naked. I received her as an urgent case. The next day she gave me her history, but I will let her speak for herself: 'I am a very gay person, sir. I love the ball. I have not absented myself during my pregnancy, which yesterday passed the seventh month. At ten o'clock last evening I was one of the first at the dance, near the Place du Trone. I did my best. After several country dances I felt pains. So much the worse, said I, if it is coming this evening, as I have not reached my full time. I will leave the hall as late as possible. But the pains continued. The more I suffered the more I danced. In the *cavalier seul*, which at our balls leaves the ladies to dance alone, seized with sharp pains, I made some astonishing contortions while dancing. I had a remarkable success. Then the *gallop* followed, in which I seized my partner with a vigor I did not know I was capable of, when suddenly the waters broke. The accident was observed, but was attributed to a different cause. The jokes rained on me. I tried to escape; they pursued me. I ran out; they followed me. I passed down the Boulevard Mazas; some thirty of them were at my heels. Where the Mede Charenton branches off I climbed over the board fence of a wood-yard. Fortunately, my pursuers had lost track of me. I sat on the ground; it was time; the child came five minutes afterwards. I have wrapped it up in my handkerchief; and small as it is, I think it will live.' She was right; both mother and child did well, and she left the hospital ten days later without any disagreeable complication.''

EXTRA UTERINE PREGNANCY OF SEVEN YEARS STANDING—DISCHARGE OF THE FŒTAL SKELETON BY THE RECTUM.—(M. H. De Brundu Boiston, *La Progres Medical*, June 30, 1883.) The patient, aged thirty-seven years, was taken suddenly in the second month of an apparently normal pregnancy, with an extremely acute pain in the lower portion of the abdomen, followed by syncope, vomiting and coldness of the extremities. This was the outset of an attack of peritonitis which was very severe, lasting two months. Pregnancy continued regularly with no other trouble than swelling of the legs, up to the middle of the ninth month. Fifteen days in advance of the expected time, labor commenced. Expulsive pains became frequent, and the neck of the uterus became patulous. At the end of three days these phenomena ceased suddenly; all painful contractions stopped; the abdomen seemed to be smaller; the neck of the uterus became firm and closed, and the next day the patient got up and attended to her usual occupations. For several days her breasts troubled her by their tension, accompanied by a somewhat abundant secretion of milk. Six weeks later menstruation was re-established, and her menses have continued for the past seven years with promptness and regularity. During that period the general health has been excellent; no pain in the abdomen; no irregularity in the intestinal organs; nothing to indicate any uterine or periuterine disorder. Eight months previous to the date of making the report,

the patient was taken with sharp abdominal pains, fever, general malaise, anorexia and vomiting. Diagnosis peritonitis, and the patient lay in bed five weeks, during which time some hair was passed in the stools, mixed with fæcal matter. Five months later, *i. e.*, three months before the date of report, the patient discharged by the rectum little bones in great number, belonging to a fœtus at term. Each stool contained one or two. These bones were entirely deprived of any soft parts. A great part of the skeleton has been discharged in this way—ribs, vertebræ, tibia, radius, humerus, femur, scapula, temporal, sphenoid, superior maxillary, and numerous phalanges. All these bones are in an advanced state of ossification, more so than is seen at birth. In the scapula, the ribs and the other long bones mentioned, the diaphyses are ossified throughout. At present there is very good general health; good appetite and no intestinal trouble; bowels regular; no blood in the stools, but from time to time these bones are expelled in the midst of the fæcal matters. On feeling the lower part of the abdomen, on the right side, a tumor is found, of the size of a fœtal head at term, not painful on pressure. It has slightly diminished with time. Rectal examination throws no light on the subject.

A New Method of Reduction in Dislocations at the Elbow-Joint. J. E. Kelly, f.r.c.s.s., etc. *Dublin Jour. Med. Science*, July.—The operator sits on the corner of a table, at the end of which the patient is placed upon a chair. The injured limb is drawn under the surgeon's proximal thigh, which rests, close to the joint, on the anterior surface of the humerus, while the olecranon is accurately placed on the anterior surface of the lower third of the distal femur, and the proximal foot is "hitched" behind the other leg, which is flexed firmly against the frame of the table. In order to obtain the most favorable fulcrum, the surgeon fixes his proximal elbow against the antero-internal aspect of his corresponding thigh, and, grasping the wrist of the patient with both his hands, reduction is effected by the simultaneous and co-operative action of the muscles of the arm, back and thigh. Fixation and counter-extension are supplied by the powerful thighs of the operator, and coaptation is effected, with great nicety, by the backward pressure of the proximal femur against the anterior surface of the humerus, while the distal femur forces the olecranon forward.

Anæmia and Somnambulism.—The *France Médicale* has found the following interesting notice in a journal of April 11th, 1883: "A physician desires to find an anæmic girl to form a lucid somnambulist. Pay, 100 francs a month. Three seances a week, from 4 to 6. Address letters to M. Dereca, Poste Restante, Bureau de la Bourse, Paris."—*Moniteur de la Policlinique.*

Treatment of Ulcer of the Stomach.—Dr. F. P. Atkinson, *Practitioner*, July.—Complete rest in in bed. Teaspoonful of Brand's essence of beef, or Valentine's meat juice in a little cold water, in small quantities every four hours; a wineglassful of milk and lime water (mixed in equal proportion,) to be taken frequently, and the body to be rubbed with olive oil morning and evening. The beef essence and milk were very gradually increased, and, when the pain had almost subsided, a little sponge cake, bread, barley water, arrow-root, etc., were allowed, and, at last, by very slow degrees, ordinary food replaced the liquid diet. No stimulants. No aperients. ℞. Medical treatment: 8 grains of tartrate of iron, 15 minims of tincture of conium, 15 minims of tincture of columba, 15 minims of glycerine. In one ounce of water, three times daily.

Effect of Alum Gargles upon the Teeth.—M. Young prescribed a gargle containing a small proportion of alum for a woman suffering from chronic pharyngitis with catarrh of the middle ear. The patient, finding relief, continued its use for some three weeks. But perceiving that, at meals, her teeth began to crumble into little pieces, she consulted her dentist, who considered it due to the alum gargle, as when the enamel is removed from the teeth, the alum breaks down the dentine. To prevent this it is best, immediately after using an alum gargle, to wash the mouth out with a solution of bicarbonate of soda or an alkaline water.—*Courier Medical.*

What Our Neighbors Think of Us.—The *Lancet*, London, June 30, 1883, contains the following: "The annual meeting of the American Medical Association was held in Cleveland, Ohio, on June 5th to 8th. The President, Dr. John L. Altee, delivered the opening address, in which he gave some reminiscences of his early medical life, mentioning some of his old teachers and schoolmates, and referring also to the code of ethics, showing what the state of the profession was prior to the adoption of the code, and what good results the code has accomplished. The feeling in reference to the question of altering the code in the direction desired by some New York practitioners, was very marked indeed, and it was quite evident that the general body of the profession in America has no sympathy whatever with those who would degrade it by the adoption of the 'new code.'"

The same number has a long and interesting editorial on Dr. Austin Flint's "Medical Ethics and Etiquette." To do it justice the editorial would have to be quoted in full.

At a meeting of the Board of Trustees of the newly organized Women's Medical College, of Kingston, Canada, the following were appointed professors: Obstetrics, Dr. M. Lavell; Surgery, Dr. M. Sullivan; Anatomy, Dr. C. Irwin; Materia Medica, Dr. A. S. Oliver, Practice of Medicine, Dr. H. Saunders; Medical Jurisprudence and Sanitary Science, Dr. T. M. Fenwick: Institutes of Medicine and Histology, Dr. W. H. Henderson. The college will be opened this fall.

Dr. Edgar A. Dean, of Brockton, has been made a member of the Massachusetts State Board of Health, Lunacy and Charity.

THE

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, AUGUST 25, 1883.

COLLECTIVE INVESTIGATION OF DISEASES.—It is known to most of our readers that, during the past year, an organization has been effected by prominent members of the British Medical Association for the purpose of establishing a systematic method of collecting facts regarding the prevalence, causes, and results of all the more important diseases. The organization is headed by a central committee called the "Collective Investigation Committee of the British Medical Association," of which Dr. G. M. Humphrey is Chairman, and Dr. F. A. Mahomet is Secretary. The plan embraces the establishment of local committees in all parts of the kingdom. Under the direction of the general committee a circular or "Memorandum," intended to aid in directing the attention of the practitioners, is prepared concerning each disease and numbered, and with it a card containing a full series of questions in the most convenient form for answering. A copy of these memoranda and cards is sent through the local committees to all those practitioners who are to be enlisted in the work of investigation. The cards as soon as filled are to be returned to the secretary of the local or sub-committee, who returns them, properly arranged, to the secretary of the general committee. For a time the returns were published in the columns of the *British Medical Journal*, but soon became so numerous as to occupy too much space, and, in May last, it was proposed by the general committee to publish only abstracts of the more important returns in the *Journal*, and publish the full reports in separate volumes or "Records" at such intervals as might be necessary. At the recent meeting of the American Medical Association in Cleveland, Dr. J. S. Billings presented a communication from the Secretary of the Collective Investigation Committee of the British Medical Association, inviting the co-operation of the American Association in establishing a similar system of collective investigation work in this country, thereby making the work international so far as to embrace all English speaking peoples. As the American Medical Association, through a standing committee appointed five or six years since, had been prosecuting a system of co-operative investigations concerning the relations of meteorological conditions to the prevalence of acute diseases, the communication presented by Dr. Billings was referred to that committee for consideration. As chairman of the committee to which the subject was referred, I desire at present to simply explain to the members of the American Association the nature and extent of the work in which they are invited to engage. This will be accomplished most perfectly, perhaps, by quoting the following as a specimen circircular or memorandum, with the series of questions to be printed on a card convenient for answer and return:

COLLECTIVE INVESTIGATION COMMITTEE.

MEMORANDUM (No. 1) ON ACUTE PNEUMONIA, ESPECIALLY WITH REGARD TO ITS ETIOLOGY AND EPIDEMIC PREVALENCE. BY OCTAVIUS STURGES, M.D., AND SIDNEY COUPLAND, M.D.

The object of this inquiry is to collect evidence from those who are best able to afford it, bearing on the natural history of acute pneumonia as observed in this country; and especially its etiology. Upon this latter question opinion is much divided, and while in other countries valuable material has been collected respecting it, little has been done in our own. It is now desired that an impartial investigation should be made upon the disease, in the hope that information of great value may be elicited. Such an investigation might reasonably be expected to be of service in the promotion of particular measures of prophylaxis, and probably also in the establishment of a rational therapeutics is this disease.

At the present day, two views are commonly held, concerning the etiology of an attack of primary acute lobar pneumonia in a previously healthy individual. They may be concisely summed up under the terms: 1. Exposure; 2. Infection. The first view is that generally accepted; the question is, What grounds exist in favor of the second? That this latter form of pneumonia does exist, possibly to a far greater extent than is admitted, seems likely, not only from the records that appear from time to time upon "epidemic" and upon "contagious" pneumonia, but also from the well-attested facts of the ordinary course of the disease. All clinical observers are agreed that the fever characterizing many of the best marked cases of acute pneumonia does not run parallel with the physical signs of the pulmonary inflam-

mation; that it does not, in other words, coincide with the latter in degree or in duration. For instance, high fever usually accompanies a small tract of inflammation, when this is seated at the apex of the lung instead of at the base; and again, it not uncommonly happens in an ordinary case of basic pneumonia that the fever subsides rapidly (by crisis) some days before the local signs indicate a corresponding improvement in the damaged organ. These are but two examples out of several which might be quoted, as affording *prima facie* support to the view that in the disease we call "pneumonia" there is something over and above the mere condition of an inflamed lung; some influence, call it septic, or what not, which, attacking the whole organism, has its local and manifest expression in pulmonary inflammation. Have we, in a word, in the inflamed lung, a condition related to some underlying influence (at present unknown) in a manner analogous to the bowel affection characterizing typhoid fever; or, to the cutaneous inflammation of facial erysipelas; or, on the other hand, is pneumonia simply a local disease, solely due to "exposure," like catarrhal affections?

We have here, however, not to deal with speculations, but only to ask for facts. The facts supplied may go far to show that an "epidemic" of pneumonia means nothing more than a great prevalence of the disease due to atmospheric conditions, to which the term "epidemic" is no more applicable than it is to bronchitis, when that happens to be prevalent. The Collective Investigation Committee invite the profession to aid them in determining a question, the solution of which will materially further the progress of scientific and practical medicine.

The main points to which attention is directed are given in the accompanying schedule. They do not involve detailed statements, and most of them can be answered by a mere affirmative or negative, or by the erasure of certain words. A few brief explanations will suffice to show the purport of the questions.

The answers to the questions concerning *occupation* and *habits* will point to the existence or not of any factors peculiar to the individual, which may operate in rendering him susceptible to the disease. From them it will be learned whether his life, passed in the counting-house, factory, or workshop, or in the farm or mine, be sedentary or active; whether the occupation, in short, be one likely to expose him to unsanitary or miasmatic influences, to changes of temperature, to great physical fatigue or mental effort, or to other conditions whereby his general health may have suffered, or his liability to "take cold" be enhanced; while, as to habits, it may be expected that some light may be thrown upon the extent to which impoverished diet, and especially *alcoholic intemperance*, conduces to the determination of pneumonia.

Then follow a series of questions specially intended to elicit facts bearing upon the existence of epidemics of pneumonia, and the conditions under which they arise. The *locality* and *situation* of the patient's dwelling, whether this be in an elevated position, isolated and exposed, or sheltered in a valley, or buried among trees, or in the heart of a thickly-peopled town, together with the nature of the soil on which it stands.

It should be explained that, under the next heading, *atmospheric conditions* prevailing at the time of the attack or epidemic, it is only intended to ask for such general statements as "dry," "damp," "wet," "cold," "hot," "changeable," and the prevailing wind—such as come naturally under the head of "weather"—without any detailed "meteorological" data being required; as these could be supplied, when necessary, by reference to the records of the Meteorological Office.

The next query requires a single word in answer from the practitioner. Are there *other cases of pneumonia* in the patient's house or in the surrounding district? If there be other cases, and an outbreak of pneumonia be generally prevalent, the observer's returns upon *each* of the cases that come under his notice will afford the chief evidence of the presence of "epidemic pneumonia," so far as his practice goes. To make the information complete, it is to be hoped that, whenever pneumonia is unduly prevalent in a district, every practitioner concerned will take part in this inquiry. In this way the Committee would be placed in possession of a mass of facts of the greatest value accumulated by independent observers.

It is also of great importance to learn whether, at the time of the prevalence of pneumonia, there be concurrently an undue prevalence of the *specific fevers, e.g.*, typhoid, scarlatina, diphtheria, erysipelas, etc., as it may happen that conditions liable to produce such diseases in some individuals may favor pneumonia in others. It must be understood that examples of pneumonia occurring as a complication in the course of a specific fever are not required. Where, however, as sometimes happens, pneumonia occurs in the *initial* stage of a specific fever—notably typhoid—such a case should be recorded in this inquiry. In like manner, information is asked for as to any concurrent undue prevalence of those ill-defined mild febrile conditions, to which the terms *febricula* and *catarrhal fever* are applied, with the view to ascertain whether they also rise under conditions existing at the time when pneumonia prevails.

The next question applies to a different branch of the subject. In asking for a return of the concurrent prevalence of *bronchial catarrh*, it is intended to ascertain how far an "epidemic" of pneumonia may be explained by the existence at the time of meteorological rather than "septic" conditions. If, for instance, the returns show that pneumonia and bronchial catarrh are both unduly prevalent in a particular district, where there is no reason for suspecting any unsanitary influences, but at a time when cold and damp weather is in the ascendant, then surely it may be fairly concluded that the pulmonary and bronchial disease have in this instance the same non-specific etiology; whereas, on the other hand, if pneumonia largely prevail, and catarrhal affections be at a minimum, there will be ground for suspecting that meteorological variations were not alone, if at all, to be assigned as the cause of the pneumonia.

Next on the list comes the important subject of

sanitary conditions, which, if carefully inquired into, may throw much light upon many an "epidemic" of pneumonia. It may be discovered, for instance, that, when several members of a household have been in succession struck down by the disease (not at the time generally prevalent in the district), the house itself is in an insanitary state, and that its inmates have been poisoned by sewer-gas or other noxious effluvia. Or, again, the practitioner, meeting with an unusually large number of cases in his district, may find that the drainage is generally defective. If a reasonable doubt exist on these matters, the word "uncertain" will sufficiently express it.

The remaining queries refer solely to the *family* and *personal history* of the patient and the leading features of his attack. From the answers furnished, it will be possible to learn whether there be any uniformity in the extent and seat of the pulmonary inflammation, in the course of the concomitant fever, in the rate of mortality, etc.

Lastly, space is left for any additional remarks from the observer which appear to him desirable; but there is no need for him to go beyond the few points named, as answers to them will furnish all the information required; and he will find that these replies can be made without the expenditure of much time. Facts alone are asked for, and those neither numerous nor abstruse; but they should be plainly and simply stated, unbiased by views or opinions; and so presented, they will be collated and analyzed, with a view to the solution of one of the many vexed questions in medicince.

Form of Card about to be Issued.

Initials of patient. M. or F. Age.
Married. Single. Widowed.
Occupation.
Temperate. Intemperate. Total Abstainer.
Food—sufficient, insufficient.
Place of residence.
Locality—high, low, damp, dry, exposed, confined.
Prevailing wind at onset of attack.
Atmospheric condition—dry, damp, wet, cold, hot, changeable.

(State whether "many" or "few" of each disease.)	In Same House.	In District.
Cases of pneumonia.....		
" any kind of fever*.....		
" catarrhal fever..		
" tonsillitis		
" herpes		
" bronchial catarrh		
" erysipelas.....		
" other infectious diseases..		

* Nature of the prevalent fever.

Sanitary condition of house—good, bad, indifferent.

Sanitary condition of district—good, bad, indifferent.

Family history of lung disease.

Previous illness of patient, with dates.

Attack preceded by rigors. Date.

Premonitory symptoms.

Date of onset.

Part of lungs affected. R. base, apex. L. base, apex.

Expectoration—blood, rusty, white, none.

Fever—severe, moderate, mild.

Highest range of temperatuae.

Duration of fever.

Termination of fever—sudden, by gradual subsidence.

Duration of physical signs.

Result.

Sequelæ.

Remarks on any special feature of the case.

Plan of treatment.

It is evident that the value of the facts gathered in the answers to such brief card questions as the above, would be in proportion to their number and the accuracy with which they were observed and recorded. In a country embracing so great an extent of territory as ours, it will be very difficult for a general committee of the National Association to select such local or sub-committees in all parts of the country as will be judicious and efficient in distributing the cards and memoranda to such practitioners in their respective districts as will be best qualified to use them, and prompt in properly arranging the returns and transmitting them to the secretary of the general committee. If each State Medical Society could be engaged in the work of establishing the proper sub-committees in the several districts or counties of its own State, and through a State committee receive the returns from the sub-committees, and after their examination and arrangement transmit them to the general committee of the national organization, it would be more likely to secure results of value, both in regard to quantity and quality, than by any other method. The institution of such co-operative work, bringing into direct practical relations the national, State, and district medical societies, would have a strong tendency to harmonize the interests and increase the membership of all those organizations; and whatever can be done which will induce practitioners generally, to observe more carefully and keep a written record of the cases coming under their care, will be of great benefit to them, by increasing the accuracy of their knowledge and the extent of their mental discipline. To establish such a system of collective investigation throughout our country as is proposed, will require time and much judicious work on the part of the general committee having it in charge. But the subject is of sufficient importance to merit the attention of our readers, and elicit suggestions in regard to the best methods of procedure from those who are willing to give it their attention.

THE ST. LOUIS MEDICAL SOCIETY.—This Society, by direct action, has denied having either requested or authorized the presentation of the preamble and resolutions asking for a revision of the Code of Ethics, which were offered by a member at the meeting of the American Medical Association in June last, and promptly laid on the table.

CHOLERA AND YELLOW FEVER.—No new developments of importance have taken place in regard to either of these diseases during the past week. The Board of Health of San Francisco, fearing the introduction of cholera from China, has declared all Asiatic ports infected, and ordered all vessels arriving from such ports to undergo full quarantine. Many, failing to trace any positive evidences of the *importation* of cholera into Egypt, are beginning to discuss actively the question whether the present plague in that country is not a disease essentially different from the Asiatic cholera, and dependent on local causes. It is to be hoped that the many special

commissions appointed or encouraged by the European governments, for investigating the nature of the present cholera epidemic in Egypt, will be sufficiently free from the influence of preconceived theories, to give reports embodying only plain and fully verified facts.

FOREIGN CORRESPONDENCE.

PARIS LETTER.

PARIS, August 8th, 1883.

Of all the theories propounded at the Paris Academy of Medicine, I know of none more absurd than that enunciated by M. Decroix, a retired army veterinary surgeon, on the depopulation of France, and the degradation of the French nation. In his paper, which he read at a meeting of the Academy, the author endeavored to make out that these conditions were brought about by the abuse of tobacco, which, in France, contained at least 9 or 10 per cent. of nicotine, and which, by its pernicious influence on the system, caused a diminution in the number of births and an increased rate of infantile mortality. Whether this theory was considered worth listening to or not, the members present paid no attention to the reading of the paper, which was performed in the midst of noise and marked indifference in the Assembly.

To produce anæsthesia for surgical purposes, the smallest amount of chloroform as pure as it can be obtained, is to be poured on the linen on the part covering the space between the nose and the mouth. This the patient inhales, and at the end of the expiration that follows, a second drop is poured on the linen, which the patient inhales, so that at each inspiration the patient takes in one drop of chloroform vapour mixed with the inspired air. The patient is recommended to breathe naturally, and, if after a few minutes anæsthesia is not produced, two drops instead of one are to be poured. This has been the subject of a communication by Dr. Seyraud, of Bordeaux. In this paper the author objects to the "siderative" method employed by surgeons in the administration of this substance, and he proposes in its stead the following method, to which he has given the name of "Méthode Dosimétrique." It consists of a piece of batiste folded twice and extended over the face of the patient in such a way that only the nose and mouth are covered by it. One single drop of chloroform on the linen for each inspiration. In this way complete anæsthesia is obtained in seven or ten minutes, which is arrived at gradually without the intervention of the stage of excitement or of hyperæsthesia, even in alcoholic subjects and the most nervous women. As soon as anæsthesia is obtained, the chloroform must be suspended for one or two minutes and then administered in doses of two drops per minute, on an average, if it is desired to prolong the chloroformic sleep independent of operation. If the patient has a tendency to wake up, the dose should be increased, and the author has by this means been enabled to keep up anæsthesia for an hour and a half. The advantages claimed for this method, are the procuring of anæsthesia more rapidly and more economically than with the method in vogue, and the avoidance of the risks inherent to chloroform.

Cholera of the genuine Asiatic type, which broke out in Egypt about the 22d of June, has naturally excited considerable alarm among the inhabitants of Europe. In France, while every precaution is taken to prevent actual invasion, the sages are expatiating on the etiology and nature of the disease. Nothing particularly new has been advanced. While it is believed by some, and they are in the majority, that every outbreak of Asiatic cholera can be traced to India, others affirm that it may originate *de novo*. M. Jules Guérin is the invincible representative of the latter theory, and at a recent discussion of the subject at the Academy of Medicine, he reiterated the opinion he expressed more than forty years ago at the same Academy, that the disease was not contagious except under certain conditions of aptitude and receptivity; that each epidemic was purely local, and that the evolution of the disease, like that of other epidemics, was the product of certain "medical constitutions" resulting from successive modifications of the atmosphere and of the organism. This view was vehemently opposed by M. Fauvel and others, who expressed themselves in rather strong terms against the English, whom they condemned as being too mercantile and selfish to allow their own interests to suffer in any way. They referred to the non-observance by the English of quarantine, though they themselves are beginning to find out that practically such a stringent measure was of itself of little use in effectually checking the spread of the disease. But I am afraid that our learned confrères were actuated more by political than by purely scientific considerations, as their language, and indeed that of the French press in general, has been stamped with great acrimony against the English; so much so that the latter have considered it necessary, by semi-official communications, to remonstrate with our French neighbors, and, it is to be hoped, with some effect, for, after all, there can be no objection to the discussion of international interests, but it must be carried on with loyalty and courteous impartiality.

It was to be expected that M. Pasteur, the great "microbist," as he is called, must have his say in the matter. He has organized a scientific mission which is to proceed to Egypt, to study the nature of the malady, and he foresees the possible existence of a microbe in the blood or in some of the viscera, which, if discovered, would marvellously simplify not only all prophylactic measures, but would open a new field for the more rational therapeutics of the disease. The mission is composed of men selected by M. Pasteur, and the necessary funds and sanction have been granted by the Parliament for the purpose. The following are the names of the members: M. M. Roux and Thuillier, attached to the laboratory of M. Pasteur; Strauss Agrègé, of the Faculty of Medicine of Paris, and Nocard, professor of veterinary medicine, all well known for their biological researches. M. Pasteur has given them written instructions, not only as regards the prosecution of their investigations, but for their own protection against possible infection.

DOMESTIC CORRESPONDENCE.

PHILADELPHIA LETTER.

The subject of a possible outbreak of cholera in the United States still excites more or less speculation in the medical and sanitary circles of this city, and although the general opinion seems to be that we have little to fear before next summer, due precautions should be taken to prevent it from obtaining a foothold in our midst, or that, in case the disease does effect a landing every means are used to keep it from spreading and becoming epidemic. It is possible, nay, probable, however, if cholera again appears abroad next summer, that it will reach the United States in spite of all quarantine against it, for, judging from past experiences, proper precautions will not be taken until it is too late and the harm done. One ship's cargo from an infected port is as dangerous to us as the hosts of an invading army, and, as it is pretty sure that the enemy will obtain a landing, the means for repelling its attacks are exceedingly important. It is a well established fact that cholera depends for sustenance on filth; and, on the other hand, cholera rarely invades districts free from filth-contaminated soil, air or water supply. It follows, therefore, that the best weapon we can use against cholera is cleanliness. It is hardly necessary to say that there is plenty of food for cholera in our large cities at present. Judging from the present sanitary condition of Philadelphia, it will have a feast when it reaches this port. Dead dogs and decaying vegetable matter, and putrid garbage of all kinds abound in back alleys even in the center of the most densely populated part of the city. The Board of Health are powerless in the matter; all they can do is to report it to the Highway Department; and the Highway Department has let out the cleaning of streets to contractors who remove the filth when it suits their convenience. We greatly need a general Board of Public Works in this city, with representatives from each department, who shall have a general oversight of the city government. As it now is, each department is independent of the other, and there is not that harmony of action that there should be. But there is small probability that any reform will be effected; the city will be, in all probability, as dirty next year as this. The cholera may come, and if it does, there will be a feeble effort by an inefficient city government to repel the foe, and then it will break loose to do its work of destruction.

A party of prominent Philadelphia physicians recently visited Cresson Springs, to be the guests while there of the Juniata Valley Medical Association. The party consisted of Drs. Wm. B. Atkinson, Wm. M. Welch, Philip Leidy, John V. Shoemaker, W. S. Stewart, C. R. Prall, W. St. Clair Ash, W. R. D. Blackwood, O. P. Rex, Joseph D. Nash, F. B. Hazel, F. E. Stewart, H. M. Richards, H. T. Taylor, L. K. Baldwin, Carl Leiter, Chas. B. Nancrede, Rosh Leaman, Geo. F. Shattuck, J. D. Schoales, Alfred Jones, Wm. Gardiner, Horace Ladd, L. S. Clark, Chas. M. Seltzer, Benj. F. Baer, James Graham, Napoleon Hickman, F. M. Perkins; and from Camden, N. J., Wm. Izard, A. M. Mecray, E. L. B. Godfrey.

The medical meeting which they went to attend was an interesting one, and the frolic afterward still more so. By request of the officers of the Keystone Hotel Company, an inspection was made of the Mountain House and Surroundings, and of the mineral springs for which Cresson is noted.

The waters of Cresson Springs are worthy of note, both as regards variety and medicinal qualities. A spring of cold, sparkling water, protected by a handsome pavilion in front of the hotel, refracts the light deceptively through its crystal depths, giving the impression to the beholding eye that the stones at the bottom are in easy reach. The water of this spring is *absolutely pure*, yielding to analysis neither organic matter or mineral salt, and the cool liquid is not only a refreshing summer drink, but has been highly recommended in the treatment of the rheumatic diathesis, certain diseases of the kidneys, etc. Another spring is ferruginous, another aperient, containing a large proportion of magnesia, and a third is strongly impregnated with alum, and appears useful in various vaginal and uterine disorders.

In addition to the advantage presented by its waters, the climate of Cresson is cool in the summer, and the surrounding mountain scenery some of the most beautiful of central Pennsylvania.

A CASE OF PUERPERAL ECLAMPSIA.

I was called to see Mrs. A. R., aged 17 years, primipara, on the morning of Aug. 5, 1883. I found her deeply comatose, and just having a frightful convulsion. On inquiry I learned from her husband that she had complained of severe headache all night, and that she frequently micturated. Towards morning she vomited. She had anasarca, especially in the face and extremities. She expected to be confined towards the last of the month. On examination I found no dilatation of the os. I gave a hypodermic injection of 6 grs. of hydrate of chloral, which rendered her conscious. I then left, and at noon found her having convulsions again. I gave another injection of chloral hydrate, and as soon as she could swallow, I gave her 20 gtts. of tinct. verat. viride. This caused severe nausea and vomiting for a while, and then she became quiet. Before midnight I gave her two injections of chloral hydrate and one of 20 gtts. of tinct. verat. vir. After midnight I decided to fall on chloral hydrate alone. Dr. Fritz, my consultant, thought I would, probably, get the best effects from that drug. I then gave her three injections of about 8 grs. from 1 to 5 A. M., Aug. 6. In these four hours she had three spasms. At 5 A. M. I left, and returned at 8 A. M., when I found her just having another spasm, the first since I left. I gave her another hypodermic injection. At 9:30 A. M. I gave her a rectal injection of 40 grs., and ordered one every four hours. In the evening she was half conscious.

The next morning, Aug. 7, she was altogether conscious. She passed no urine from 4 A. M. Aug. 5, to 5:30 P. M., Aug. 6. She had bitten her tongue fearfully before I saw her the first time. She was deeply and continuously comatose from 4 P. M. Aug. 5 to

about 4 P. M. Aug. 6. About 4 A. M., Aug. 8, labor pains came on. At 9 A. M., when I reached the house, I found the os dilated to admit one finger. At 3:30 P. M. I ruptured the membranes, and at 4:45 I delivered her of a healthy boy. She had no convulsions during nor after labor. The only medicine she took before, and for some time after labor, was "imperial" drink. I then prescribed tinct. ferri. chloride. No abscesses resulted from the injections. The convulsions were evidently of uræmic origin, as they ceased altogether after the kidneys began to act. Chloral hydrate, administered by enema and in sufficient doses, will, I believe, control the spasms more efficiently, as well as more lastingly, than any other agent. W. F. HERTZOG, M.D.

NEW JERUSALEM, PA., Aug. 20, 1883.

CORRECTION.

WALNUT HILLS, CINCINNATI, Aug. 23, 1883.

DR. N. S. DAVIS—*Dear Sir:* My article in No. 5 contains an error of statement. The sentence referred to is on page 138, second column, and should read as follows: If aortic aneurism be eliminated, absence of abnormal precipitation of the carotid pulse is conclusive, in any case, of absence of an open state of the aortic valves. Yours truly,

A. T. KEYT.

SOCIETY PROCEEDINGS.

REPORT OF THE SECTION ON STATE MEDICINE.

CLEVELAND, O., Tuesday, June 5, 1883.

The Section of State Medicine convened in the United States Court room at 2:30 P.M., with Dr. Foster Pratt, President, in the chair.

After some preliminary remarks by the President, the Section fixed upon the hour of 2:30 P.M. Wednesday to hear the report of the working of the Illinois State Board of Health, and especially as to its actions in regard to regulating the practice of medicine.

Dr. A. L. Gihon, of the Navy, read a paper entitled "Medical Education the Fundamental fact in Medical Ethics," with accompanying resolutions. The discussion was opened by Dr. Rauch, Secretary of the State Board of Health of Illinois, and was followed by Dr. Billings, of the Army; Hibberd, of Indiana; Hakes, of Pennsylvania; Sheehan, of New York; Tuckerman, of Ohio; and Bush, of Delaware.

On motion of Dr. Gihon, action upon the resolutions was deferred until Thursday at 2:30 P.M.

Section adjourned.

CLEVELAND, O., June 6, 1883.

The Section met in the chapel of the Young Men's Christian Association, and was presided over by Dr. Pratt.

Dr. H. A. Johnson, of Illinois, read his report, entitled "The Working of the Illinois State Board of Health."

By consent, members were allowed to ask questions of Dr. Rauch, Secretary of the State Board of Health of Illinois. This somewhat novel, though very interesting part of the proceedings, was made to cover a detailed account of the practical functions of the Board.

Dr. Pratt, of Michigan, offered the following:

Resolved, That the labors of Dr. William Farr, of England, (recently deceased), in the origination, classification, and compilation of vital statistics, labors begun in 1838, and perseveringly, wisely, and ably continued by him for nearly half a century, are recognized by the medical profession of the United States as an enduring monument to his ability and learning as a physician, as the real incentive to and the foundation of our own sanitary work, and as a perpetual blessing to present and to future generations of our universal humanity, entitling his name and fame to stand with that of other great men whose genius and labors have resulted in beneficent revolutions of the medical, surgical and sanitary thought and activities of the civilized world.

Passed, and referred to the Association for adoption.

Section adjourned.

THURSDAY, June 7, 1883.

The Section met in the Y. M. C. A. chapel at 2:40 P.M., and was called to order by the Secretary, who on motion of Dr. Gihon, took the chair in the absence of the chairman.

After the minutes had been read and approved, Dr. Gihon called up the resolution offered in connection with his paper, read before the Section on Tuesday, and made the special order of the day. In opening the discussion, Dr. Gihon took occasion to reaffirm his allegiance to the organic law of the American Medical Association and to disclaim the partisan character, which had been attributed to his paper by those who had not understood its purport. His endeavor, throughout, had been to show that the narrow spirit in which medical ethics had been interpreted if carried to its legitimate conclusions would necessarily ostracise such eminent reformers as Professors Bowditch, Cabell, Stephen Smith, and Johnson, while it would place under ban every liberal minded member of the profession."

Moved by Dr. Hake, of Pennsylvania, that the resolutions be taken up *ad seriatem*. The first, after a verbal amendment by Dr. Didama, was discussed by Dr. Rochester, of N. Y., Dr. Hake, of Pa., Dr. Hopkins, of N. Y., Dr. Baldwin, of Ala., and others, was put upon its passage and lost.

The second resolution was also amended, but in such manner as not to compromise its spirit, and as Dr. Gihon said of this resolution that it embodied all that he considered of importance in the theme of his paper; the discussion enlisted much interest. It was entered upon by Dr. Baldwin, of Ala.; Didama, of N. Y.; Pratt, of Mich.; Hay, of Ill.; Vaughan, of Mich.; Billings, of U. S. A.; Bell, of N. Y.; Hibberd, of Ind.; Hopkins, of N. Y.; Crago, of N. Y.; Johnson, of Ill., etc.

The importance of State boards of examiners was urged by the advocates of the resolution, and agreed to without exception by those who, at the same time, did not believe that the adoption of the resolution would influence legislators in the formation of

such boards. The resolution was lost, and on motion, all the resolutions were laid upon the table.

Dr. A. N. Bell, of New York, introduced the following resolutions:

Being impressed with the truthfulness and importance of the memorial of Parlimentary Bills Committee of the British Medical Association under date of March 17, 1883, the American Medical Association urge upon the Congress of the United States the subject of competent medical and sanitary service, and proper provision for its maintenance on board all trans-oceanic passenger vessels, and that a committee of five be appointed to promote this object, and report upon the condition of the subject at the next session.

The resolution was passed and referred to the Association for adoption.

On motion, the Section on State Medicine adjourned *sine die*.

THOMAS L. NEAL, M.D.,
Sec'y Section State Medicine.

FOSTER PRATT, M.D.,
Chairman Section State Medicine.

REVIEWS.

BOOKS AND PAMPHLETS RECEIVED.

Pathology and Morbid Anatomy of Tubercle. By N. Senn, M.D.

A Case of Abdominal Cystic Tumor, when, Seven Years after Removal by Laparotomy, a Second Operation was demanded. By W. F. Atlee, M.D. (Reprint.)

A Case of Fungosities of the Bladder. By W. F. Atlee, M.D. (Reprint.)

The Essentials of Pathology. By D. Tod Gilliam, M.D. P. Blakiston, Son & Co., Philadelphia.

Report of the Health Officer of the District of Columbia, 1882.

Bulletin de L'Acadèmie de Mèdicine, Paris.

Bulletin de la Soc. Chimique, Paris.

Archives Mèdicales Belges.

Canada Medical Record.

Canadian Practitioner.

St. Petersburger Medic. Wœhenschrift.

Aerzfliches Vereinoblatt fur Deutschland.

Pennsylvania Hospital for the Insane, Report for 1882.

Transactions of the Medical Society of West Virginia, 1883.

MISCELLANEOUS.

THE seventh annual meeting of the American Dermatological Association will be held at the Sagamore House, Green Island, Lake George, August 29, 30 and 31. The following papers are announced: Dr. Piffard: Treatment of Acne. Dr. Hyde: A Study of the Coincidences of Syphilitic and Non-Syphilitic Affections of the Skin. Dr. Graham: General Exfoliative Dermatitis. Dr. Stelwagon: Impetigo Contagiosa. Dr. Robinson: Alopecia Areata. Dr. Duhring: 1. On the Value of a Lotion of Sulphide of Zinc in the Treatment of Lupus Erythematosus. 2. Report of a Case of Ainhum with Microscopic Examination. Dr. Atkinson: A Case of Multiple Cachectic Ulceration. Dr. Sherwell: 1. Pseudo-Psoriasis of the Palm. 2. Malignant Papillary Dermatitis. Dr. Bulkley: 1. A Hitherto Undescribed Vegetable Parasite Found on the Human Skin. 2. A Clinical and Experimental Study of Pruritus. Dr. Van Harlingen: Experiments in the Use of Naphthol. Dr. Fox: A Trip to Tracadie. The President, Dr. Taylor: 1. Peculiar Changes Observed in the Non-Ulcerating Tubercular Syphilide. 2. Certain Appearances of the Initial Lesion of Syphilis at its Beginning.

THE NUMBER OF MEDICAL PRACTITIONERS IN PARIS.—The medical profession in Paris comprises 1,915 doctors of medicine, 12 doctors of surgery, 83 health officers, 43 foreign medical men, 1,500 midwifes, 845 apothecaries and 95 veterinary surgeons. Among the doctors of medicine are two ladies, one French and the other Russian. The population of Paris is estimated at 2,239,928. The senior medical man is M. Segalas, who was born in 1792 and took his degree in 1817; next in seniority comes Dr. Ricord, the celebrated syphilographer, who was born in 1800, and took his degree in 1826. The oldest midwife obtained her diploma in 1815. She declared that during the sixty-eight years she has been in practice she had, on an average, 100 births a year, so that she has during that period brought 6,800 children into the world.—Paris Correspondent *Lancet*, June 30, 1883.

UPON the affidavits of Drs. Alfred Stille and Hayes Agnew, the court has granted a preliminary injunction restraining the circulation and sale of a book entitled "An Epitome of Medicine and Surgery," published by S. M. Miller, M. D., of Philadelphia. Drs. Stille and Agnew claim that their lectures have been stolen and published without authority.

DR. PITMAN, Registrar of the Royal College of Physicians, London, Mr. Saunders, Surgeon Dentist to the Queen, and Mr. Porter, of Dublin, one of the Surgeons to the Queen in Ireland, have been knighted. Dr. Banks, of Dublin, has declined.

DR. ST. JOHN ROOSA, of New York, and Dr. Blake, of Boston, have been added to the Committee on Organization of the Third International Otological Congress, which is to meet at Basle, Switzerland, in the first week of September.

THE sixteenth annual meeting of the Canada Medical Association will take place at Kingston from the 5th to the 7th of September. Dr. Mullin, of Hamilton, is the President.

NECROLOGICAL.

CURTIS, JOSIAH, M.D.; born at Wethersfield, Conn., April 30, 1816; died at London, England, August 1, 1883, while traveling. He was fitted for college at the Academy at Monson, Mass., and received his M.A. degree from Yale College. He taught school for a time, and was principal of the Salem (N. J.) County Academy. He taught also in Philadelphia, and while there studied medicine and graduated M.D. at Jefferson Medical College in 1843. He settled to practice in Lowell, Mass. In 1849 he removed to Boston. Dr. Curtis made the study of the sanitary management of large cities a prominent branch of his profession, and twice visited Europe in pursuit of the subject. He assisted in the preparation for publication the mortality statistics of the U. S. census of 1860. In 1861 he was Secretary of the Boston Sanitary Association. He served as brigade surgeon in the late war; served in various stations. After being mustered out in 1865, with a brevet promotion, he took up his residence in Knoxville, Tenn. In 1872 he accompanied the U. S. Geological Survey as Surgeon, Microscopist and Naturalist, traversing portions of the Rocky Mountains, including the Yellowstone Lake and its many geysers. In 1873 he became chief medical officer to the U. S. Indian Service, which he organized and placed on a useful footing. He resided for many years in Washington, where he is well and favorably known. He was a member of the Massachusetts Medical Society, and of the American Medical Association since 1847, and of a number of other scientific and literary associations. Dr. Curtis was an industrious and faithful worker in various fields of scientific research, and a contributor to medical and other periodical literature. He was the discoverer of collodion, or liquid gun-cotton.

J. M. T.

JEROME, JAMES H., died in the seventy-first year of his age, in the city of Saganaw, State of Michigan, August 8, 1883, of inflammation of the liver, after an illness of about three months.

Funeral services were held at his late residence on the following day, when his remains, accompanied by his family, were borne away to his family burying-place in Trumansburg, New York.

Dr. Jerome was a man of vigorous intellect, keen perceptions, retentive memory and independent character, and his manners of mingled courtesy and dignity marked him as old-school gentleman, alive to the issues and important questions of the day and age in which he lived.

He helped to organize, in 1866, the Michigan State Medical Society, did much to shape its policy, was twice elected its president, and did as much as any other member to promote its interests.

His high sense of honor, especially among his professional brethren, and his stout opposition to every infringement of the code of medical ethics, both in the Society and out of it, made him an enemy to pretenders, of every description.

His domestic relations were characterized by deep affection, and his genial smile was the sunlight of the household, where his loss is most keenly felt. His intercourse among his friends was of the most cordial character, his hospitality ample and his friendship deep and lasting. Quick to oppose what he thought wrong in a friend, as in others, he reminds us of the proverb:

"Faithful are the wounds of a friend, but the kisses of an enemy are deceitful."

His funeral was attended by about twenty-five physicians from different parts of the State, who came hither to pay their last tribute of respect, and to assist in perpetuating his memory.

Following the funeral services, the physicians in attendance met at the parlors of the Taylor House in Saginaw, and organized by calling Dr. H. Tupper to the chair and choosing Dr. Geo. E. Ranny secretary. The life and character of Dr. Jas. H. Jerome was then reviewed by a number of speakers who had known him best.

On motlon of Dr. Ranney, the chairman was requested to appoint a committee of three, making Dr. C. V. Tyler chairman, whose duty it should be to present, in the form of resolutions, the sense of the meeting concerning the life and character of the deceased, and furnish a copy of the same to the family, also copies to the local press and to the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. The motion prevailed, and the chairman appointed such committee; which committee has, so far as practicable, embodied the views and feelings of those present in the following preamble and resolutions:

WHEREAS, We, professionai associates of the late Dr. Jas. H. Jerome, assembled to do our last sacred duty to his remains, feel, intermingling with our sorrow and regret, great admiration for his brave and true qualities of head and heart, his loyalty to the interests of his profession, his animated conversation, his vigor in debate, his joyful and happy countenance, his cordial salutation and welcome which none of us can ever forget, therefore,

Resolved, That while we bow with submission to the rulings of a Divine hand in removing from us a beloved member, our hearts are deeply stricken, and we will hold his character in grateful remembrance and endeavor to emulate his example.

Resolved, That our sympathy and condolence are herewith tendered his sorrowing family in thir great bereavement.

C. V. TYLER,
GEO. E. RANNEY,
HENRY B. BAKER,
} Committee.

The meeting then adjourned.

GEO. E. RANNEY, *Secretary*.

COX, CRISTOPHER C., M.D., of Maryland, was born in Baltimore, Md., August 16th, 1816, died in Washington, D. C., November 25th, 1882. He was the son of Luther J. Cox and Maria (Keener) Cox. He entered Yale College in 1883 and graduated in 1835. Medicine was his preference as a profession, and after reading and attending three full courses at the Washington Medical College, in Baltimore, he received the degree of M. D. Shortly after graduating he

settled to practice in Baltimore, Md., but in 1843 removed to Easton Talbot. In 1848 he was appointed Professor of Medical Jurisprudence and Institutes of Medicine in the Philadelphia College of Medicine, but resigned after delivering one course of lectures. Dr. Cox was an accomplished scholar, an eloquent public speaker, with a fondness for public life and position. In 1854 he was nominated for Congress in the First District of Maryland, but was not elected. On the breaking out of the war between the States he took part with the general government, and was appointed a surgeon in 1861. In August 1862 he was made Medical Purveyor of the Middle Military Department. In 1864 he was elected Lieutenant-Govenor of Maryland. In 1868 he was appointed Commissioner of Pensions, and the following year was elected to the chair of Medical Jurisprudence and Hygiene in the Medical Department of the University of Georgetown College. In 1871 Dr. Cox was, on the reorganization of the Health Department of the District of Columbia, appointed on the Board of Health, and was by the Board chosen for several terms their President. Dr. Cox was a member of the Medical and Surgical Faculty of Maryland from the period he began practice. He became a member of the American Medical Association in 1848, was appointed chairman of various important committees, and for years made admirable reports on necrology. He was Vice President in 1863. He was active and influential in the organization of the American Public Health Association. He was a Secretary of the Medical Society of the District of Columbia, and a number of the medical associations of the District, the Historical Society of Maryland, and of many scientific and literary societies. He was a chaste and beautiful writer, and has contributed some beautiful verses that will hold their place in literature. In 1879 Dr. Cox was appointed chief executive officer to superintend the United States Department in the International Exhibition in Australia. He was well fitted for this responsible position by his familiarity with the duties and requirements, as he had served acceptibly in an official position at the Centennial Industrial Exhibition at Philadelphia in 1876. But his health broke down and he returned to the United States, but did not regain his health. He was tenderly cared for by his wife and daughters. His remains were taken to Eastern Maryland where they are interred.

J. M. T.

COOPER, GEORGE F., M.D., of Americus, Georgia. Was born in Wilkes county, Georgia, July 31, 1825; died at Americus, Georgia, December 3, 1882. He studied medicine in Harris county, Georgia, took his first course of lectures in Transylvania University, and graduated in Jefferson Medical College, Philadelphia, in 1845. In the winter of 1847–8 he took a third course in Philadelphia, and spent the winter of 1850–1 in Charity Hospital, New Orleans. He practiced medicine in Perry, in Savannah, and afterwards in Americus. In 1856 he entered the Baptist ministry. In 1861 he entered the Confederate service as surgeon of Lawton's brigade, in which he remained to the close of the war. In 1846 he married Miss Cornelia I. Stacey, of Houston county, Georgia, and in 1878 he was a second time married to Miss Carrie M., daughter of Prof. A. C. Kendrick, D.D., of the university at Rochester, N. Y. He leaves a widow, six children, and four grandchildren.

Dr. Cooper was a man of prominence in Georgia, not only as a physician but also as a minister of the gospel, having served churches at Lebanon, at Datton, at Albany, and at Americus. During his ministerial career he continued in practice of medicine, and devoted the later years of his life wholly to medicine.

ROBERT BATTEY, M.D., of Georgia.

CARMICHAEL, GEORGE FRENCH, M.D., was born in Fredericksburg, Va., March 9, 1806; graduated in medicine April 7, 1828, at the University of Maryland; died at Fredericksburg, Va., Aug. 27, 1882, aged 76 years, Dr. Carmichael was a leading physician in Fredericksburg for upwards of fifty years, where he spent his life, with the exception of three years during the civil war when he was a surgeon in the Confederate army, and stationed at Danville, Va., in charge of a large hospital. He had a most exalted appreciation of the dignity and honor of his profession, and no consideration could induce him to swerve from what he believed to be the strict line of duty. No man ever enjoyed more entirely the love and respect of all classes of the community in which for so many years he had been a public benefactor than did Dr. Carmichael. No kinder or more generous heart ever beat in human bosom. His unselfish nature, particularly, fitted him for the calling which, of all others, draws for the best and noblest qualities of our nature, and his life exemplified the character of a Christian gentleman.

F. D. CUNNINGHAM, of Virginia.

HAYNES, TIMOTHY, M.D., Concord, N. H., was born in Alexandria, N. H., September 5th, 1808, died of paralysis at his residence in Concord, May 28th, 1883. He was the son of David and Rebecca Haynes. Having fitted himself for the study of medicine he pursued his professional studies under Dr. Mussey, of Hanover. For some time he served as Demonstrator of Anatony at Dartmouth College. He attended his last course of lectures at the Jefferson Medical College, in Philadelphia, where he graduated as M.D. in 1836. He at once settled to practice in Concord and speedily acquired a reputation for skill in surgery. He built up a fine anatomical museum, which was destroyed in the great fire of 1851. During his earlier professional life he instructed many students. In 1849 he was a delegate from the Merimack Pathological Society to the American Medical Association. He made a study of the claims of the water cure treatment of deseases, and gave some encouragement to the establishment of an institution for the special treatment by this method. Dr. Haynes attended closely to practice, and held a prominent position in the profession. About 1843 he was united in marriage to Laura Brackett, of Littleton, who survives him, as do three daughters.

J. M. T.

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ORIGINAL ARTICLES.

REMARKS ON INTRA-PELVIC INFLAMMATION IN THE CHRONIC FORM.

BY W. H. BYFORD, M.D., OF CHICAGO, PROFESSOR OF GYNECOLOGY, RUSH MEDICAL COLLEGE.

[Presented to the Section on Obstetrics and Diseases of Women.]

The terms parametritis and perimetritis are erroneously supposed by many to include the whole subject of intra-pelvic inflammation. These terms are misleading, because as now often used they present to the mind the idea that all cases of inflammation not confined to the uterus must belong to one or the other of these.

Actual observation teaches the important fact that perimetritis and parametritis generally exist together, and that they are usually complicated with inflammation of the uterus, and not infrequently the ovaries and fallopian tubes are involved. When we use the terms perimetritis and parametritis, if anything like a definite diagnoisis is made we ought to understand that the greater *intensity* of lesion is manifested in one of the tissues, but that inflammation extends to the others also. It is apparent, therefore, that to determine the tissue in which the inflammation is located is often difficult, simply because uncomplicated cases are extremely rare.

The complexity of the lesions of the pelvic organs and tissues might be inferred from the almost absolute unity of the vascular and nervous supply, and the fact that the genito-spinal center is the common controlling influence.

I make these general remarks upon the pathology of intra-pelvic inflammation, as an introduction to what I have to say of the various forms of its manifestation in different organs and tissues within the pelvis.

The more obvious conditions of chronic parametritis are:

First—Suppuration, or chronic pelvic abscess, located more frequently, but not always, in the broad ligament, the consequence of cellulitis. Chronic purulent accumulations are often found also behind the uterus, and are doubtless the result of local peritonitis.

The chronic pelvic abscess is generally the sequel of acute inflammation, and attains chronicity from the imperfect evacuation of the pus after acute inflammation has terminated in suppuration. The discharge in these cases may be continuous, but the suppurating cavity, in not being completely evacuated, is consequently not obliterated.

The evacuation is deficient sometimes because the outlet is through a tortuous canal; at others because the termination of the canal is in the rectum or bladder. The muscular fibers of the walls of these receptacles, after a certain amount of pressure is taken off by partial evacuation, contract around the opening, and do not yield until the accumulation renews the pressure sufficiently to overcome their resistance. These processes of partial evacuation and accumulation are repeated indefinitely. Again, temporary interruption of the purulent discharge may be caused by the distal extremity of the evacuating tube being higher than some portion of the suppurating cavity.

If the abscess is located in the connective tissue, the elasticity of that tissue will very materially diminish the size of the suppurating cavity each time the evacuation takes place, and eventually may entirely obliterate it. It does not always do so, however. The sufferings experienced by the patient in these cases consists in pyæmic and septic symptoms, resulting from the resorption of the pus and dèbris of d composing material contained in the cavity. While the vital energies of many patients will sustain them until the process of evacuation is completed, others will die from exhaustion.

The remedy in such cases is found in surgery, and consists in making a more direct outlet through the vagina, large enough to at once completely evacuate the pus and enable the surgeon to cleanse and disinfect the cavity. Where the evacuating canal is tortuous or too small it may sometimes be dilated by instruments until the cavity can be evacuated and washed out. Where the pus is accumulated in a sac formed in the peritonæal cul-de-sac behind the uterus, the difficulty will not be so easily overcome by enlarging the opening, as the pyogenic cavity is not surrounded by elastic tissue, as in the broad ligament. It will, as a consequence of this latter fact, require a longer time to fill up by granulation. In such cases we may hasten granulation by stimulating the cavity with injections of a weak solution of permanganate of potash, swabbing it out with iodoform or some other stimulating remedy. A cavity situated in this position will bear such stimulation better than one situated in the broad ligament. In cavities thus located we will often find decomposing coagula the remains of a hematocele, the most common origin of abscesses in this part of the pelvis.

The suppurating variety of intra-pelvic inflamma-

tion may, however, be primarily chronic, and never rise above that grade.

In such cases the inflammation persists for several years. A considerable quantity of pus is formed without hectic or other symptoms of absorption, save a general feeble state of health. In these indolent abscesses the pus is formed and remains enclosed in the cavity for a very long time, with, in fact, very little tendency to evacuation. I saw one case of this kind in which I know from observation that pus was retained for three years. Upon first seeing the patient I was so well assured of the presence of pus in the right broad ligament that I proposed to puncture it. The patient, however, declined, and, residing in a distant city, went home. Three years afterwards I made an opening in it, and removed a quantity of dirty putrid sero-pus. The patient was then in an advanced state of phthisis, and died in a few months.

Another case I saw with Dr. T. D. Fitch. The patient assured us that the tumor had been discovered seven years before by her medical attendant, who told her she had cellulitis of the broad ligament, which had already suppurated. There were eight ounces of the same thin pus as in the former case.

A cavity that has contained pus for so long a time has ceased to be pyogenic; its walls are thin and yielding over a large surface, and when evacuated has no tendency to fill up again. These cases are sometimes connected with the tubercular diathesis.

Second.—Chronic parametritis is often met with when there is a decided tumefaction—in one of the broad ligaments, more frequently than otherwise—the remains of an acute attack, and, when not noticed or attended to properly, is a latent focus of phlogosis that may easily be elevated into the acute grade. We frequently meet cases of this kind among poor patients, who are obliged to exert themselves more than is compatible with the process of resolution. The consequences are that the woman has repeated returns of acute attacks until suppuration takes place. Sometimes in these or even more favored patients injudicious thoroughness and earnestness in an examination to ascertain the exact condition of the patient develops an acute inflammation that inflicts fearful suffering, and perhaps cripples the patient for life. Or, again, without sufficiently careful examination to ascertain the existence of this nodule of inflammation, irritating applications are made to the uterus, or a pessary is introduced that presses upon the locality of the effusion, or the womb is lifted high enough to make traction upon the diseased ligament, to give origin to acute inflammation. When the tumor is small, or in some remote part of the ligament, these mistakes are very liable to occur. There is no doubt also that in numerous instances these effusions are primarily the results of chronic inflammation, and have for their origin causes operating less violently. After the absorption more or less completely of the exudate in such cases, the broad ligament may be left thickened, rigid, shortened and irritable for a long time, and become the nidus for an acute attack.

Careful manipulation will enable us to discover any of these conditions without doing damage. They should always be the object of treatment, and removed before treatment for chronic metritis or replacement of the uterus is safe or justifiable.

The proper local treatment is hot-water injections and counter-irritation.

The general management is of the first importance, and consists of alteratives, tonics, feeding and rest. We should expect and require a long course of treatment for the cure of cases of this kind.

Third.—Chronic local *peritonitis* may exist (either as a *separate disease* or a complication of cellulitis, ovaritis, and salpingitis) in the retro-uterine *cul-de-sac*, and over the broad ligaments retaining a displaced uterus in a fixed retroversed or retroflexed position. The fixed position may be maintained by a somewhat solid cohesion of the opposed surfaces of the peritonæl covering of the uterus and the posterior lining of the Douglass pouch. Or by the extension of bands of false membrane that permits of limited motion. When associated with general chronic pelvic inflamation it is but one item, is obvious and easily detected; but when local peritonitis is the only inflammatory condition it may require much care to diagnose it. When I find the uterus turned backward and resisting reasonable force, I suspect this form of chronic inflammation, and if manipulation for the purposes of restoration gives the patient much pain, I am confirmed in such suspicion. Enlargement of the uterus makes that organ, to a certain extent, difficult of replacement, and attempts to do so will generally cause pain; but even in such a case the presumption is that there is contiguous inflammation, and all the cautions to avoid aggravating that condition should be observed. An examination per rectum will give us valuable information as to the presence of retroversion and local peritonitis. By passing the finger through the rectum up the posterior wall of the uterus we will ascertain the condition of the peritonæum as to sensitiveness. With the evidence we may thus gain, and by gentle attempts to move or replace the uterus, we can make a pretty definite diagnosis. This inflammation may also exist in the cul-de-sac without the malposition of the uterus; in this case the tenderness behind that organ will be sufficiently diagnostic.

Sometimes we find local inflammation limited to the vesico-uterine reflexion of the peritonæum, which may interfere with reposition from anteflexion or anteversion of the uterus. In such cases we will find any effort to move the uterus attended with pain, and there will generally also be vesical irritation of an absolute character.

The discovery of peritonæl inflammation in however slight a degree, should be a matter of caution to us against free manipulation for any purpose, and when complicating displacements, subinvolution or chronic inflammation of the uterus should be the main subject of our attention until entirely removed. I am quite sure that the lack of sufficient care in this particular has been the cause of much needless suffering.

This remark, I think, is especially applicable to efforts at replacements of the uterus when that organ is retroverted or anteverted. I would therefore em-

phasize the direction, *not to try to replace* the uterus when such attempts give the patient decided pain. Counter-irritation, hip baths, and large tepid water injections are the main items of local treatment, while the general consists of alteratives, rest and tonics. The latter is of special importance. In many cases, nourishment will be of more value than medicine, as a large number of these patients are profoundly anæmic.

Fourth.—Another condition which accompanies a great number of cases, is inflammation of the ovaries and fallopian tubes. The inflammation of the ovary and tube is not often completely isolated, but is a complication of a more diffuse lesion of the broad ligament, including most of its structures. When ovaritis and salpingitis, one or both, are the only manifestation of existing inflammation, and stand apparently alone, there will be a history of preceding inflammation of the surrounding tissues.

The most important, as well as most frequent of lesions, are indurated deposits of lymph, rendering the ligament rigid and deformed, and false membranes or trabeculæ that fix the ovary especially, and sometimes surround it in such a way as to constrict the nervous and vascular apparatus.

The ovary thus embraced in semi-organized exudation, if its structure is not completely destroyed, is so mutilated that its functions are greatly deranged, and performed with such difficulty as to cause intense local and general suffering.

According to Mr. Lawson Tait, the fallopian tubes are often the seat of chronic suppurative inflammation, which accompanies and outlasts the chronic inflammation of the ovaries. Mr. Tait regards the disease of the fallopian tubes as a more important factor in the reflex and local sufferings, as well as menstrual derangements, than that of the ovaries. While the position that the morbid condition of the fallopian tubes produces greater menstrual disorder than disease of the ovaries is a subject of controversy, it must be admitted that diseased tubes have a share in causing some of them at least, and I think Mr. Tait is right in concluding that in cases of oöphorectomy it is quite as necessary for the relief of the patient to remove a diseased fallopian tube as an unsound ovary. This is not, however, admitting that the tubes in a healthy condition have any direct effect in exciting or in any way regulating the menstrual flow. It has long been a demonstrated fact that inflammation in the broad ligament, and other portions of the pelvic tissues, gives rise to pain during menstruation and causes general hystero-neuroses.

The symptoms of inflammation situated in the ovaries and fallopian tubes are, to a great degree, like those caused by disease of the uterus and perimetric tissues. If there are any symptoms more than ordinarily distinctive of chronic ovaritis it is the suffering during the menstrual period, or the diminution or complete suppression of the menstrual flow.

Sometimes, indeed, connected with ovarian inflammation, there is complete amenorrhœa without any suffering at the periods, or any great amount of derangement of the general health. Gynæcologists not unfrequently meet with cases like the following—viz:

A young lady (27 years of age) at the age of 20 had a severe attack of pelvic inflammation that continued about three months, and, after its subsidence, for several months longer she was the subject of moderate pelvic symptoms.

When entire immunity had come about she observed that her menstrual flow was very much reduced in quantity.

For three years she enjoyed a fair degree of health and was able to exercise her vocation as teacher with her usual comfort. At the end of that time, from exposure during severe exercise, she was again attacked with symptoms of acute pelvic inflammation, in all respects, so far as she could remember, similar to the first. From the inception of the last attack to the present time the menses have been entirely suspended, and yet she is now in the enjoyment of robust health.

From the history of this case I think we can fairly infer that both ovaries were the subject of inflammation, of such a character and degree as to damage their structure sufficiently to render them incapable of performing their functions.

More frequently, however, the stroma is not so greatly changed; then the functions of the ovaries are performed with great difficulty, and attended with local pains and extensive and intense reflex suffering. To the symptoms of this latter condition the term ovarian dysmenorrhœa is correctly applied.

Rest, local depletion—in the earlier stages,—and alteratives are the proper treatment. As the symptoms become chronic we may often derive much permanent good from the effects of one or more setons over the seat of the disease. In some of them the disease is so obstinate and the suffering so great as to justify the removal of the ovaries and fallopian tubes.

Fifth.—We may have cases of slight diffuse, or circumscribed phlogosis or hyperæsthetic hyperæmia, in which no exudation can be detected, and probably there are no palpable anatomical changes. In this form the nerves and blood-vessels are highly excitable because already under the influence of morbific agents that have been acting a long time upon them, but with a degree of intensity short of that condition called an exciting cause. They are in a state of predisposition.

Whether we are justified in speaking of this state of things as inflammation or not, it is quite certainly a departure from a sound condition, in a direction leading to that process. This is probably what authors mean by the term dormant or latent inflammation. It is an actual morbid condition, possessing the two elements, hyperæsthesia and hyperæmia, from which an exciting cause gives rise to the acute form of inflammatory action.

While the inexperienced may awaken acute suffering by injudicious manipulation or the employment of too strong or improper measures of treatment in some of the other forms of chronic inflammation to which I have alluded; it is this occult variety of disease that, figuratively speaking, betrays

the most experienced, skillful, and cautious practitioners into methods of diagnosis and treatment that lead to attacks of acute inflammation, explosive in their suddenness and violence. There is no doubt in my mind that, in its subsidence, acute inflammation sometimes leaves behind it this smoldering susceptibility which lingers for months and even years as a menace to the unwary operator. Without the presence of this relict, or harbinger of acute inflammation, it would have been impossible for our accomplished countryman, Dr. George G. Engelmann, to collect so many terribly interesting cases as he reported to the Missouri Medical Society in a paper read before that body, and published in the September (1880) number of the *American Practitioner*. Many of these cases occurred in the hands of some of the most skillful gynæcologists. We cannot, therefore, say that they were the result of recklessness or ignorance.

Can we diagnose cases occurring under this division of the subject with sufficient accuracy to enable us to benefit by the knowledge?

Perhaps not always; but in most instances the careful practitioner will have his suspicions aroused by the history and the objective evidence generally obtainable. Judging from my own observation, I should say that the more dangerous cases were those in which this susceptibility was the result of previous attacks of acute inflammation. The history usually is one of inflammation of the pelvis and lower abdominal organs in months or years gone by. A disease, the nature of which may not have been well understood and treated, and vaguely termed inflammation of the bowels, typhoid, or malarial fever.

These by-gone attacks sometimes present so few marked symptoms that their nature cannot be definitely deduced from the history of them, especially when given by an ignorant patient. Most of the cases of the severe and sudden attacks, within my observation, have taken place where, it was fair to infer, this lingering susceptibility was the consequence of foregone acute attacks instead of a primary condition.

In such a morbid state, what would seem trivial exciting causes may produce terrible symptoms and disastrous consequences under even cautious management.

The untoward inflammation arising out of this susceptibility is also often the result of the too exclusive mechanical ideas entertained with reference to the management of affections of the uterus and other pelvic organs. Most of the pelvic organs lie within reach of the fingers, and instruments devised for the diagnosis and treatment of their diseases. We may thus be led to regard them as the proper subjects for free manipulation, without regard to the fact that they are endowed with vital qualities. We may not govern ourselves in our examinations sufficiently by the complaints of the patient, so much as the desire of finding every possible deviation from the natural position, size and consistence of every organ in the pelvic cavity.

Hence, thoroughness of examination in a mechanical sense is not an uncommon source of danger. In our treatment, the same preponderance of mechanical ideas leads to much mischief. A displaced uterus must be rectified by mechanical means alone, often without sufficient regard to other conditions. I have more than once seen cases where the uterus was fixed by effusion from inflammation, treated by forcible attempts at reposition.

Such attempts, I know, are recommended by men who ought to know better.

As a common practice, it would cause extensive suffering, and fail to be attended by any compensating benefits. Very few intelligent practitioners are so reckless as to disregard the actual existence of inflammation under such circumstances. But many times when the inflammation is so slight as not to give rise to noticable effusion, and yet be attended with obvious tenderness, mechanical support is resorted to, and the patient exhorted to bear some pain for the good it will bring her to have the uterus kept in position. Such treatment is usually followed by bad results.

Now, to avoid mischief from the use of mechanical support in uterine displacements, the practitioner should consider all cases in which even slight perimetric inflammation exists as unsuitable for the pessary. And when the sensitiveness characteristic of inflammation exists to a moderate degree, the uterus should not be reposited. Other treatment should be instituted and persevered in until that sensitiveness is removed, before reposition and mechanical support are resorted to. The partisan advocates of the pessary may think this is unnecessary precaution; to which I would reply, that while skillful gynæcologists may sometimes disregard this cautious view of the subject, and obtain tolerance of the pessary, even the best of them will sometimes do mischief enough to more than counteract the good they can thereby accomplish.

Our mechanical views as to the treatment of stenosis and flexions of the uterus are apt to betray us into more dangers than those above mentioned. When this slight predisponent condition is present the use of the sponge, seatangle or other dilating tent is frequently followed by great damage; and it should be remembered that the use of the tent causes this predisposition to inflammation, so that in the consecutive application of tents in any case the second and third become instruments of extreme danger. It is true that in some cases the patient escapes when extra precautions and skill are used, but it is also true that in other cases, notwithstanding all just precautions, terrible results follow.

Now, in all this, I desire to be understood as inculcating the idea that the most accomplished—not alone the ignorant practitioner—may occasionally produce the damaging conditions so appalingly delineated in the paper by Prof. Engelmann above alluded to. Similar remarks are applicable to the use of the stem pessary, either with or without the incisions of the cervix uteri. In estimating the value of mechanical treatment of the uterus we must take into consideration these *exceptional* cases. No man is skillful enough to ignore the fact that he cannot resort to these measures without great hazard to

his patient. His practice must be governed by the recognition of the *possible* consequences that may follow.

If not warned by his own observation, he should be forewarned by the researches and observations of others. I have been cognizant of numerous instances of disaster in all of the mechanical methods I have mentioned, and many deaths have resulted from the employment of some of them. These untoward cases are usually not published. They ought to be published, however, as danger-signals to warn the unwary of the hazards that beset their paths.

As the main object I had in view in writing this paper was to caution my associates against the dangers of converting a chronic pelvic inflammation into a disastrous acute form, I desire to append a summary of suggestions and inferences drawn from it.

1. The sometimes terrible effects of examinations or operations in the pelvis do not often, if ever, take place when there is not a perceptible predisposing inflammation.

2. The inflammation may be so slight as to be easily overlooked.

3. It may be an original condition; the sequence of an acute attack long gone by, or it may be the product of some immediately previous examination or operation, the effects of which have not subsided.

4. To avoid the dangers of acute inflammation we should, in making a first examination for pelvic disease, conduct it in such a way as not to give the patient much pain, and when she complains of much suffering desist at the sacrifice of completeness of diagnosis.

5. Complaints of much tenderness to the touch, or the use of instruments; especially parous women, is sufficiently diagnostic of inflammation upon which to base treatment for that condition.

6. If, with such tenderness, a thorough examination or an operation is imperative, it should be done under profound anæsthesia. There is no question, in my mind, that much less danger of ill effects is incurred in making examinations or operations on susceptible subjects, under the free use of anæsthetics.

7. Examinations or operations should not be repeated until the effects of the first have entirely passed off.

8. As chronic parametritis is a frequent complication of most of the morbid conditions of the uterus it should be always suspected and its diagnosis be carefully considered in all cases of metritis.

9. When chronic parametritis is present it should be the chief, if not the exclusive object of treatment until removed.

10. It is not safe to use the sound, sponge-treatment, or intrauterine stem when there is perimetric inflammation.

11. It is especially dangerous to replace a displaced uterus, when it is bound down by inflammatory adhesions, by any means which will overcome its fixedness by force.

12. The use of pessaries or supports of any kind which find their lodgement in the pelvis is generally followed by disastrous consequences when there is even slight primitive inflammation.

13. All local treatment of the uterus must be conducted with the greatest care in all cases where this complication is present.

FRACTURES OF THE LONG BONES.

BY JAMES R. TAYLOR, M.D., NEW YORK.

[Read before the Surgical Section of the American Medical Association, at the meeting in Cleveland, June 6, 1883.]

MR. CHAIRMAN AND GENTLEMEN:

In the limited time at my disposal I must greatly abbreviate the matter which I had prepared to offer on this occasion. I may claim, therefore, that it will not be possible for me to do justice either to my subject or to myself while omitting such large portions of a paper, which, in the nature of things, should have been presented as a whole. I will try, however, to lay before you as briefly as possible a few of the methods of diagnosis and treatment of fractures of the long bones, which have gradually taken present form in my hands during many years of extensive practice in this class of injuries as a surgeon to the "Out Door Dept. of Bellevue Hospital." I offer no apology for the crudeness or simplicity of some of the methods and appliances which I present—merely stating that with but a few hours for each clinic, and with thirty or forty patients in the ante-room clamoring for admittance to the surgery—and being but scantily furnished with necessary supplies, I seldom have either time or material for refinements; but must get down to business. What to do must be decided promptly. Dressings must be applied quickly, and in a sufficiently substantial and economical manner to suit the case in the circumstances. Therefore, my constant aim is to simplify my work both as to the time occupied and the expense involved. Hippocrates, in his work on fractures, says "There is no necessity for much study to set a broken bone. Any ordinary physician can perform it." And my respect for and confidence in the utterance of this "shade of the mighty dead" is exhibited in the fact that, I a very ordinary physician, am very often attempting to do it.

He does not mention the necessity for a thorough knowledge of anatomy both general and regional—a good general knowledge of both ancient and contemporaneous mechanico-therapeutics—a good degree of manual dexterity, together with a carefully cultivated discrimination, to enable the doctor to select or invent as the occasion requires—the mechanical means which will secure the greatest advantage to his patient with the minimum of suffering or inconvenience.

He may have assumed that the ordinary physician of our day would be possessed of all these advantages and would not require to be reminded of qualifications of such obvious necessity. And, Mr. Chairman, I think I may assume that, as I have the honor to address, probably the largest and surely the most distinguished body of surgeons ever assembled on the American continent, it will not be necessary, in my humble contribution to practical surgery, that I should enter into and discuss at any length matters of common detail which they all so well understand, or that

I should elaborate every idea to which I may give utterance, or that I should give attention to special conditions or peculiarities of cases. I will also assume that you will justify me in confining myself entirely to methods of diagnosis, which I have thoroughly tested, and to the exhibition and description of the mechanico-therapeutical appliances, also thoroughly tested in my own experience, which I am about to offer for your inspection and consideration. Without wasting the brief time allotted to me in quoting authorities, or in offering opinions of the methods of other more eminent surgeons whose lives and energies have been devoted to the development and improvement of means for the alleviation of human suffering, whether or not those means shall in all cases meet my approval.

But while I wish to abstain from criticising the methods of other surgeons, I can hardly avoid making a remark in this place in reference to the apparatus which is now so commonly used by the profession for producing extension in the treatment of fractures of the femur, viz., the weight and pulley. It has no doubt been very useful in a great number of cases, and it seems to have received the endorsement of many of the writers of our modern text books. But I do not think that any surgeon can accept it as an instrument in all respects suitable for the purpose.

Of course it will produce extension as we apply it, but it is by the clumsiest means known in mechanics. And if an ordinary workman were to present me with such a device for the accomplishment of any important mechanical end, I should conclude that he was a man of but very limited resources, as there are very many far more elegant, and at the same time equally efficient, means within the range of common mechanical science which can be applied for the purpose. This leads me to the few remarks which I have to make on the

TREATMENT OF FRACTURES OF THE FEMUR, ILLUSTRATED BY PLATES III., IV. AND V.

I will not trouble you with the methods of making diagnosis in the fractures of this bone, as there are so many situations in which fractures may occur. And these may be also so different in character that it would require too much time. Then, too, the diagnosis in most of them is made sufficiently clear by the deformity, and by the false motion and other symptoms that I will entirely omit what I would like to say on that branch of the subject, and come at once to the treatment, selecting for my present purpose a simple fracture of the middle third of the bone.

I do this the more willingly, as the principles upon which the various fractures of this bone are treated are nearly identical. And as these principles, as far as I know, had their first recognition in the good old days of Hippocrates, and perhaps chiefly by that gentleman himself, they will require neither apology nor endorsement at my hands. Extension, coaptation and fixation has been the surgeon's motto ever since his day. It is his motto still, and it will continue to be his motto while fracturable bones form the framework of animal structures.

All our inventions and improvements are limited, therefore to mere details of apparatus, and their methods of application for the accomplishment of these necessary steps to the restoration to usefulness of a limb, by the cure of the lesion which we are considering. If you will look at plate III. of the engravings, with which you are supplied, you will see that it represents a good bed of any ordinary kind. It stands level on the floor, that is to say, the foot posts are not raised upon blocks to produce counter-extension. This being to my mind a most objectionable method for obvious reasons, especially if we have a stout plethoric subject on our hands for treatment. Figure 1. Upon the bed represents a nicely padded saddle, so constructed and arranged that its base projects under the nates of the patient, the wings resting against the well-cushioned tuberii ischii, while the upright body rests against the perinæum, fitting the parts nicely.

This saddle is maintained in a vertical position by an iron brace, with an eye at one end, which fits into a hole in one end of a bedplate of hoop iron covered with cloth. On the bottom of the saddle there is also a hook for attachment to the other end of the bedplate. When these parts are in their places, the saddle is in the position shown in the engraving. Attached to the bedplate, right under the base of the upright saddle, there are two pieces of girth-web, the free ends of which are made fast to buckles, which are provided with stems for screwing into the headboard of the bed—one on each side—or the girth-webs may be simply tied to the bed posts.

This saddle when thus placed in the position indicated, with its brace and bedplate in proper relations to it, together with the girth-web straps and screw-

Plate III.

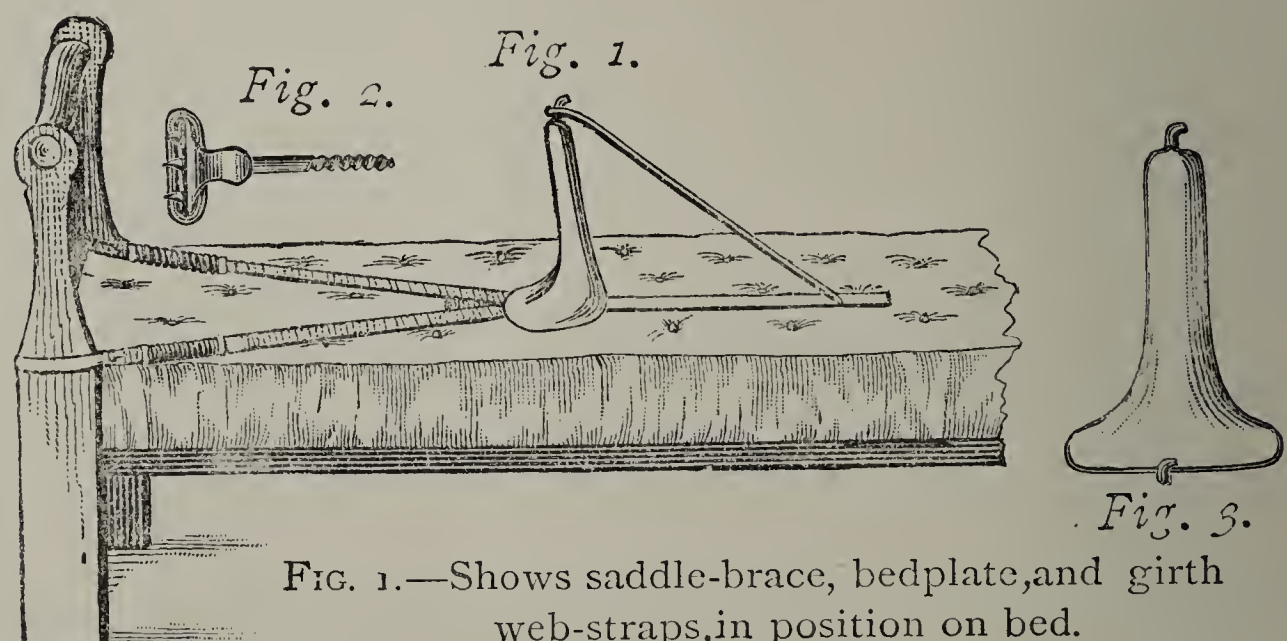


FIG. 1.—Shows saddle-brace, bedplate, and girth web-straps, in position on bed.

FIG. 2.—Screw-buckle.

FIG. 3.—Saddle.

buckles or other means of attachment to the bed-head, is the means by which I make my counter-extension in this fracture.

It will be readily seen that the amount of traction which this apparatus will resist is only limited by the strength of the materials employed in making it, and the endurance of the muscles of the patient. It certainly will resist far more extension force than a prudent surgeon would think it necessary to employ for the purpose he has in view. The efforts of the surgeon in the use of extension, being directed merely to restoring the limb to its normal length, by overcoming unnatural muscular contraction, and not to stretching the limb beyond that point, as he is well aware of the danger attending such procedure.

When it is necessary to remove the saddle temporarily the brace is lifted, and the saddle falls and the bedplate can be pulled to one side. It is readjusted with equal facility. With this apparatus we have a fixed point to resist the extension force. The patient lies comfortably on a level bed, and if he desires it, his head and shoulders may even be elevated a few inches without retarding the progress of, or in any other way interfering with the repairative process going on in the bone.

Of the saddle, the parts subjected to its contact become quite tolerant in a very short time. An occasional sponging with alcohol and water, or the placing of a cool fresh towel, however, will be found comforting and grateful. I may mention here that this method of counter-extension is equally useful in intracapsular fracture, also in diseases of the hip or knee-joint, or wherever counter-extension of the limb is indicated. Combined with this apparatus there are many methods for producing extension. Elastic bands of rubber and other forms of rubber can be made to suit nicely, especially where children are the patients. Modes of application will suggest themselves to any surgeon.

I have also used coiled springs attached to my webbing straps, under the pillow at the bed-head, while the foot of the patient is attached to a hook in the foot-board, stretching these springs sufficiently to obtain the desired amount of extension and securing them to the bed-posts by leather straps. I invented, however, some time since a little extension apparatus which suits the purpose better than anything I have yet seen. Plate V., Fig. 3 and 4. It consists of a coiled spring enclosed in a metal case. One end of the case slides into the other like a telescope tube. The large end is provided with a flange for fastening to the outside of the foot-board. This end of the case is also fenestrated, so that the action of the spring can be seen from without. On the edge of the fenestra there are figures to indicate pounds weight, and a projection on the edge of the inner tube serves as a pointer so that the amount of force required to shorten the case by pushing or pulling the inner part into the outer part is registered. Looking at Fig. 4 you will see that a stem passes through the case, the inside end of which has a cross-head for attachment to the patient by the adhesive side plasters, Fig. 2, the outer end of the stem terminates in a handle. This part of the stem screws into the other part, and is shortened or lengthened at pleasure by turning the handle. By this means the spring is compressed or lengthened so that the exact amount of extension force required in the case can be obtained simply by turning the handle backwards or forwards. Plate IV shows the method of extension by weight and pulley combined with my method of counter-extension by the saddle. The engraving will be easily understood.

As you see in Plates IV and V, the patient is represented as lying on the bed with the dressing completed. Fig. 1 in each plate represents a coaptation splint. This splint is made of what is called Holley's felt—after the inventor. It is made of various thicknesses, and is a very good article for the purpose, as it can be nicely moulded to fit the limb. I use four of these splints nicely padded. Their position is seen in the engravings.

To keep these splints in place, I use four garter bands made of

Plate V.

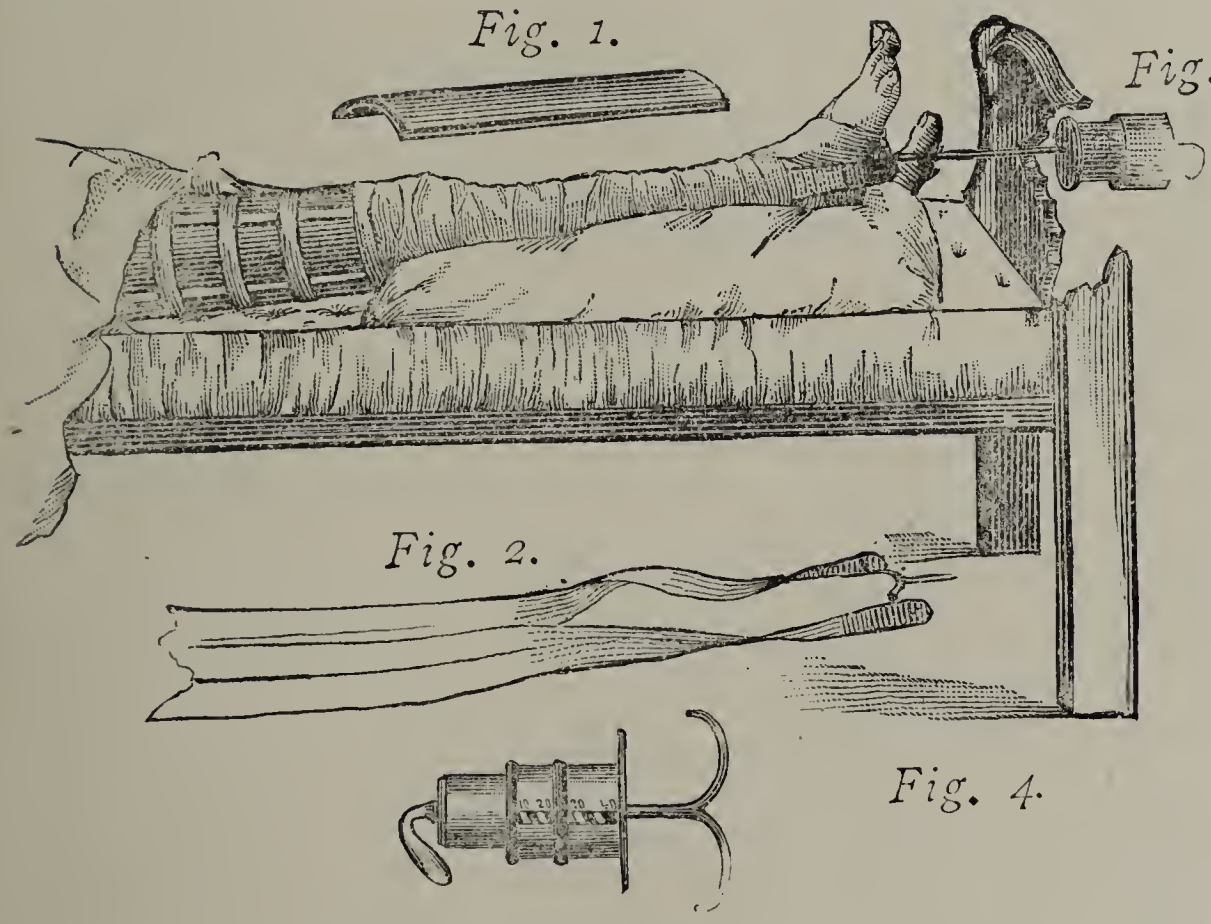


FIG. 1.—Coaptation splint.

FIG. 2.—Adhesive side plasters.

FIG. 3.—Extension foot spring.

FIG. 4.—Extension foot spring enlarged.

Plate IV.

Fig. 1.

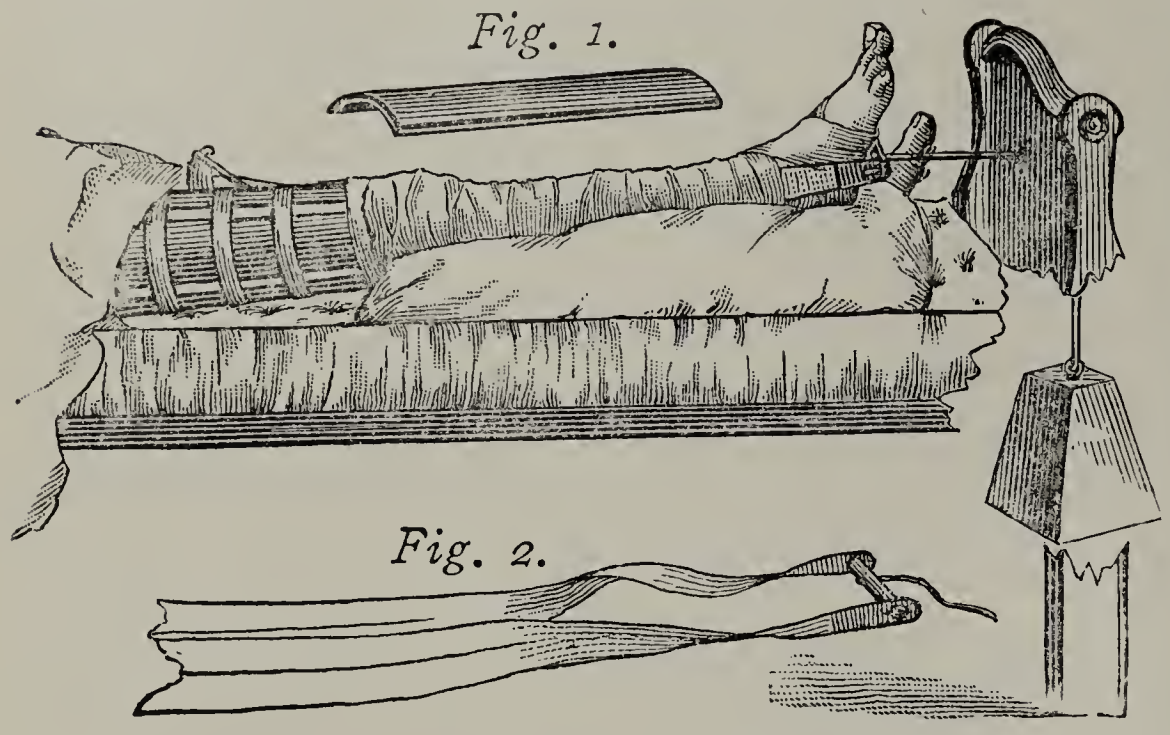


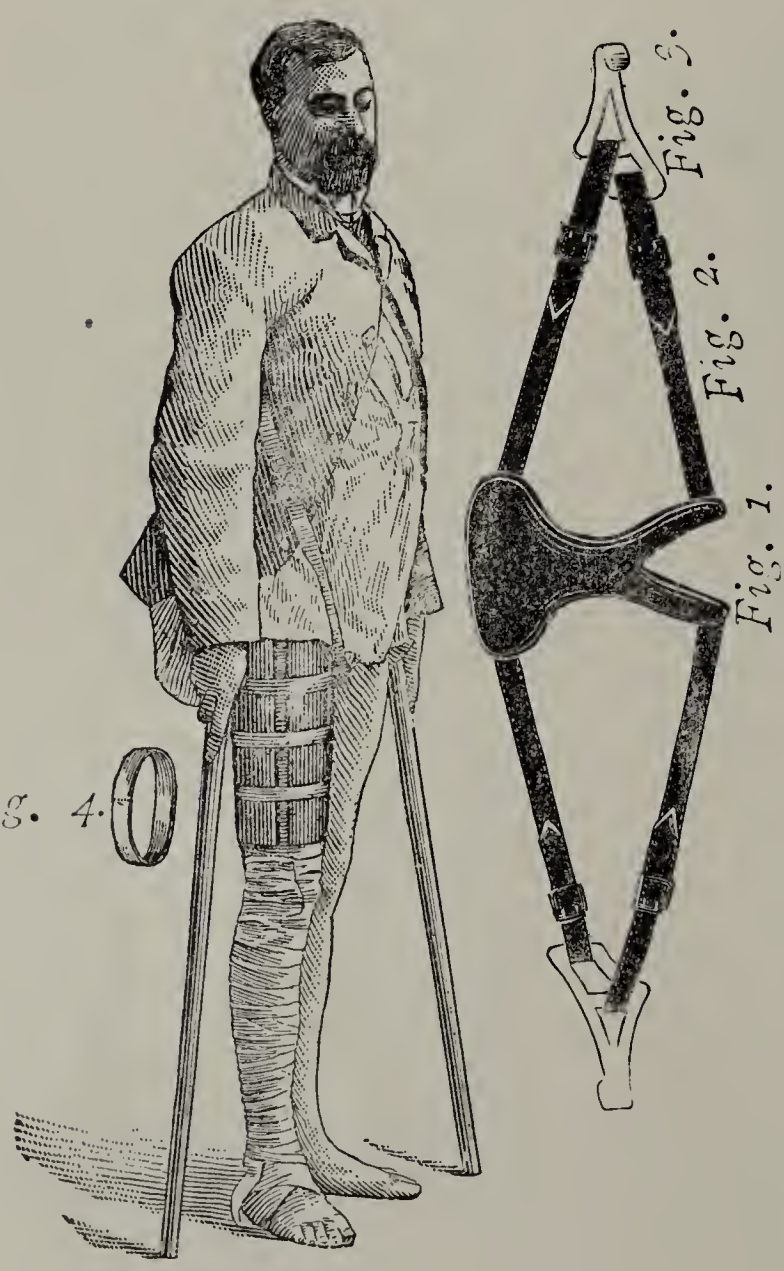
Fig. 2.

FIG. 1.—Coaptation splint.

FIG. 2 —Adhesive side plasters.

elastic similar to but stronger than that used in making gentlemens' suspenders. Plate VI, Fig. 4. These, in the first place, keep the splints firmly applied, and also, they being adjusted so that they retain a small amount of unexpended contractility, keep up equable pressure during the progress of the atrophy of the soft tissues. I am not insensible to the possibility of mischief following the use of such elastic pressure, if placed carelessly or too tightly upon the limb. I think, however, that no careful surgeon would need to be warned that ligating the limb by any means whatever would be dangerous practice. I will say here, that my own views on the subject of coaptation splints in this or any other fracture of the long bones are very simple. The true splint for a broken bone is the periosteum and the surrounding soft tissues. And if the surgeon keeps in view the fact that the result of his extension and counter-extension, if wisely and effectively applied, is to restore these tissues to their original relations, re-establishing the normal form of the canal in which the bone lies, and that when this has been effected by the application of sufficient force for the purpose, the bone itself will offer no resistance to perfect reposition. And I also assert, that if he does not succeed in re-establishing the original form of this canal, the use of any splints of whatever kind, secured by whatever means, whether elastic or non-elastic, are contra-indicated in the case. I never depend upon the pressure of a splint to do the work which I should do myself, although I recognize their usefulness in reinforcing by gentle and equable pressure the coaptating function of the soft tissues. Perfect coaptation, I am aware, is not in every case obtainable, by whatever means he may employ, but in cases where perfect reduction cannot be effected, extreme care and excellent judgment on the part of the surgeon in the use of splints is indispensable.

Plate VI.



In preparing a fractured femur for extension, I am careful to carry my adhesive side plasters, Fig. 2, up to the seat of the injury, so that no undue traction may be brought to bear upon the knee joint.

Many surgeons terminate these strips below the knee. I prefer the other method. It is an interesting fact, gentlemen, that Hippocrates, nearly five centuries before the Christian era, recommended extension for the rectification of all deformities produced by fracture and dislocation of this bone. He advises "extension in as straight a manner as possible, so that the fragments may unite properly." He also says that "it is a great disgrace to the physician to exhibit a shortened thigh."

It is probably right, then, that we should give him the credit for the introduction of this valuable principle. And as he does not say much about his methods of application, we are by no means certain that he did not use Desault's, Liston's, Buck's, and all the other plans with which you are familiar, including even those offered by your humble servant on this occasion, never dreaming that these great surgeons would re-invent them and get the credit for them all down through future ages. I should mention that I never use a long-side splint. Sometimes, however, a board like a long splint may be fastened to the body and limb to restrain movements. This

can also be effected by a piece of muslin a foot wide, one end being pushed under the hips of the patient from the injured side, and the other over his body—both ends being fastened to the opposite bed-rail. This is more easily worn by the patient, and also answers the purpose of preventing all tendency to yield to the extending force. When the patient has recovered sufficiently to leave his bed, crutches are found to be necessary to enable him to move about for exercise and for other purposes; and if you look at Plate VI you will see a good representation of a saddle-crutch which I invented some time since, and which has given a number of my patients a great deal of comfort and myself much satisfaction. The saddle and suspenders are worn inside of the clothing, the hooks alone coming out two inches below the axillæ. Ordinary sticks of proper length suit quite well for crutches if the top end is chiseled to fit the hooks of the suspenders, as they do not touch the axilla when the patient is suspended upon them. Thus the body can be maintained in a natural posture both while standing on the feet, while sitting on a chair, and while swinging in the act of stepping. I will mention two cases:

Mrs. G., a lady of two hundred and ten pounds weight, came under my care last winter with fractured fibula. When the proper time had arrived I ordered crutches, as usual. Their use was attended with so much suffering, she being afflicted with prolapsus uteri, that she was indisposed to take necessary exercise.

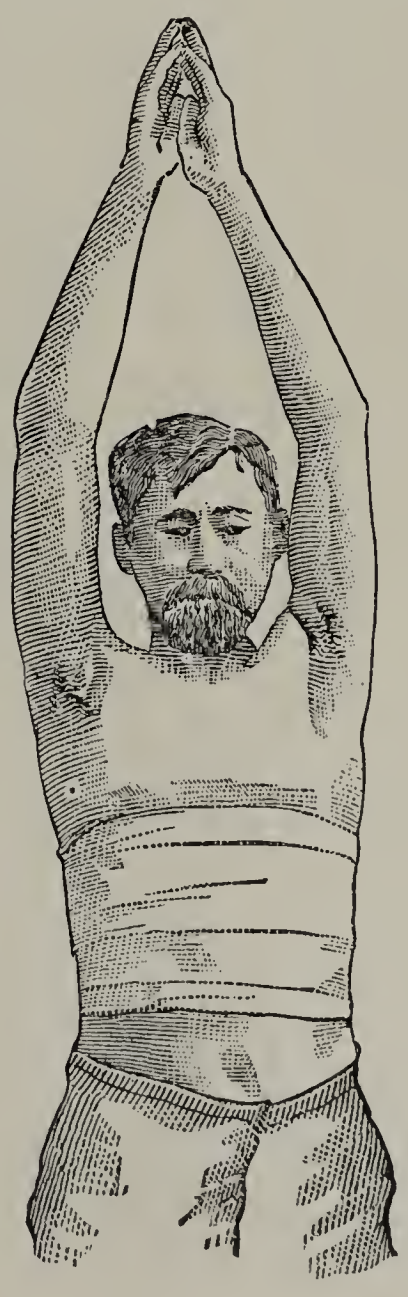
I then had a saddle prepared for her, and nicely padded to fit. This she used during the period of convalescence without discomfort walking three or four hours every day. After she gave up using it, it was re-covered with soft leather and sent to me. It had proved such a pleasant support for her that when her limb was quite restored to usefulness she abandoned the use of the saddle with regret. I pass it round that you may see how it is padded to suit the circumstances.

Mr. B., a gentleman of two hundred and thirty pounds weight, with a similar injury. On the ninth day he procured a pair of crutches, but he got along rather poorly with them. I lent him a saddle, and from that time until he got quite well he used it constantly. It is not necessary for me to explain the advantages of carrying the weight of the body upon well-cushioned pelvic bones fitted by nature for the purpose. Neither do I feel called upon to point out the inconvenience and suffering imposed upon a patient when the doctor orders him to take exercise with ordinary crutches, with the weight of his body suspended upon cross-heads in the axillæ, where he is also in constant danger of injury to the vessels and nerves contained within their boundaries. These are obvious to you all without further mention. The saddle is of simple construction, and can be made very cheaply. I use a bit of steel plate cut to shape and bended into the general form of a saddle. A few holes are drilled in it to fasten the padding, and a little rivet on each corner, with a protruding head like a button, to fasten the suspenders to. The straps and hooks can be made of any material that is strong enough to carry the body and to suit the pocket or taste of the wearer. I use the boot-strap webbing one inch wide, with button hole on one end and a buckle near the other end, so that they may be shortened or lengthened at pleasure. Leather straps answer the purpose. The hooks can be made of thick wire bended to suit. I use thin steel plate cut to shape and bended as required.

FRACTURE OF RIBS.

The diagnosis, where one or more ribs are broken, I do not often find very difficult to make. The objective symptoms, as the patient stands before me, being quite sufficient, in a large majority of cases, to lead to a correct conclusion. He exhibits more or less pleurosthotonos, with restrained movement on the injured side. Then there is more or less embarrassment of respiration. Often there is a tendency to slight but frequently recurring cough. And while he tries to suppress every movement, he finds this impossible. And it is evident that every unusually violent expiratory effort is attended by very acute suffering. This, we may conclude, is probably a case of fractured ribs, although it is still possible that a severe contusion might be accompanied by all these symptoms. His clothing is now gently removed. Inspection may or may not reveal any marked depression or bulging of any part of the thorax. The story of the injury is told. The part which received the full force of the blow is pointed out, and I now know pretty well what may have occurred to the ribs and also to the adjacent structures. But I desire to know what really has happened, and if fractures are present with resulting injury to the lung, pleura and other tissues and

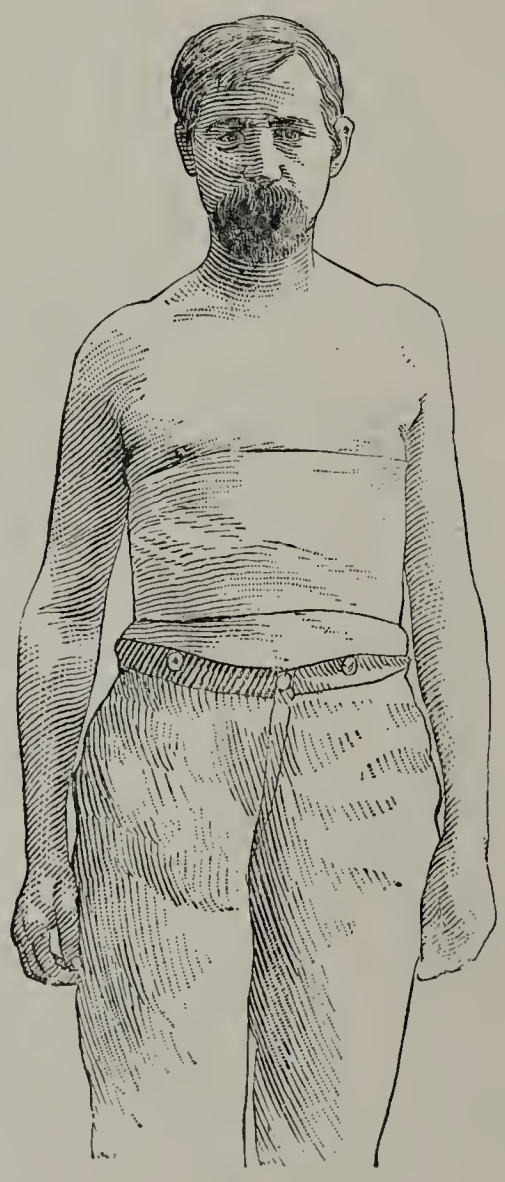
Plate XI.



depression or bulging of fragments still persist, I desire to restore them to their original relations as quickly as may be and with the least possible addition to the sufferings of the patient consistent with the accomplishment of those objects. And if there are no fractures present, the course which I pursue will not be attended with any inconvenience. I generally succeed in proving my diagnosis without ever touching, even with my fingers, the affected parts. I subject him to a series of simple maneuvers which give him but little inconvenience, and which, in a few minutes, are attended by much relief of suffering, in most cases. If you look at Plate XI you will see that I raise his hands as high as possible over his head, retain them there a minute or two, then let them down gently, and repeat these movements a number of times. This gives the intercostal muscles an opportunity to draw upon the fragments in the direction of replacement, being assisted by the pressure from within of a whole thoraxful of viscera and fluid, while outside every fiber of the thoracic muscles work in harmony with the same end in view, namely, replacement. Next, while his arms are still extended as high as possible—and it is sometimes necessary to give him assistance to maintain this position—I take a three-inch roller bandage and wind it firmly round the chest, covering an inch or two above and below the seat of the injury and secure it in place with a pin. Now I let his arms down. Usually, by this time, especially if the ribs have been fractured, the relief of his suffering is very marked. This is the case to some extent even in a simple contusion, as the parts are put at rest. I now give him a seat, throw his coat over his shoulders, and leave him a little while. An adhesive plaster band is now prepared, and in a half hour or so I am ready to apply it. If my diagnosis was correct, he can now cough without much suffering, and he takes posture again as in Plate XI, while I remove the temporary roller. If the contusion has been severe I apply a belladonna plaster smoothly over the injured part. I then put on the adhesive band, and the dressing is complete, as shown in Plate XII. Now my diagnosis has been made with more or less satisfaction to myself. But the patient has been relieved, and is now hopeful again. And what does he care for a fine Latin diagnosis as he retires with grateful thanks upon his lips and a benediction in his heart.

In a few days he returns for inspection, and possibly readjustment of his bandage. The dressing should not be removed in less than four weeks.

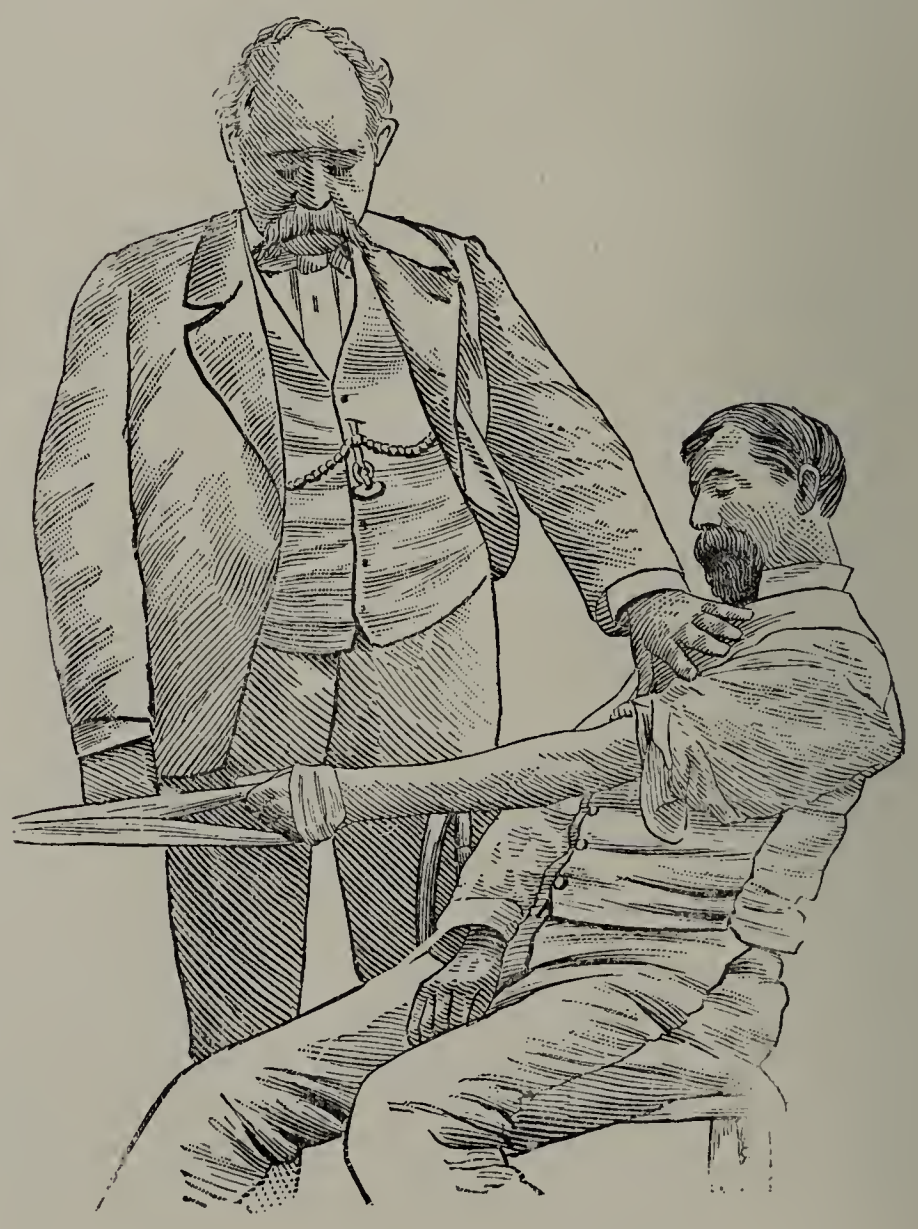
Plate XII.



FRACTURE OF LOWER END OF RADIUS, KNOWN AS COLLES FRACTURE.

The unsightly deformities at the wrist joint which result from improper treatment of this very common fracture, should make the surgeon very careful in his selection of the method by which he proposes to treat his case. The fact that he has followed a course which has been successful in the hands of distinguished members of the profession, will not justify him, in the eyes of his patient nor in a court of law, if his treatment should, unfortunately, result in a badly deformed arm, with greatly impaired function and constant and prolonged suffering. The method which has developed under my hands in the course of many years' practice, and having treated several hundred cases in my clinic in the out-door department of Bellevue Hospital, is very simple and inexpensive;

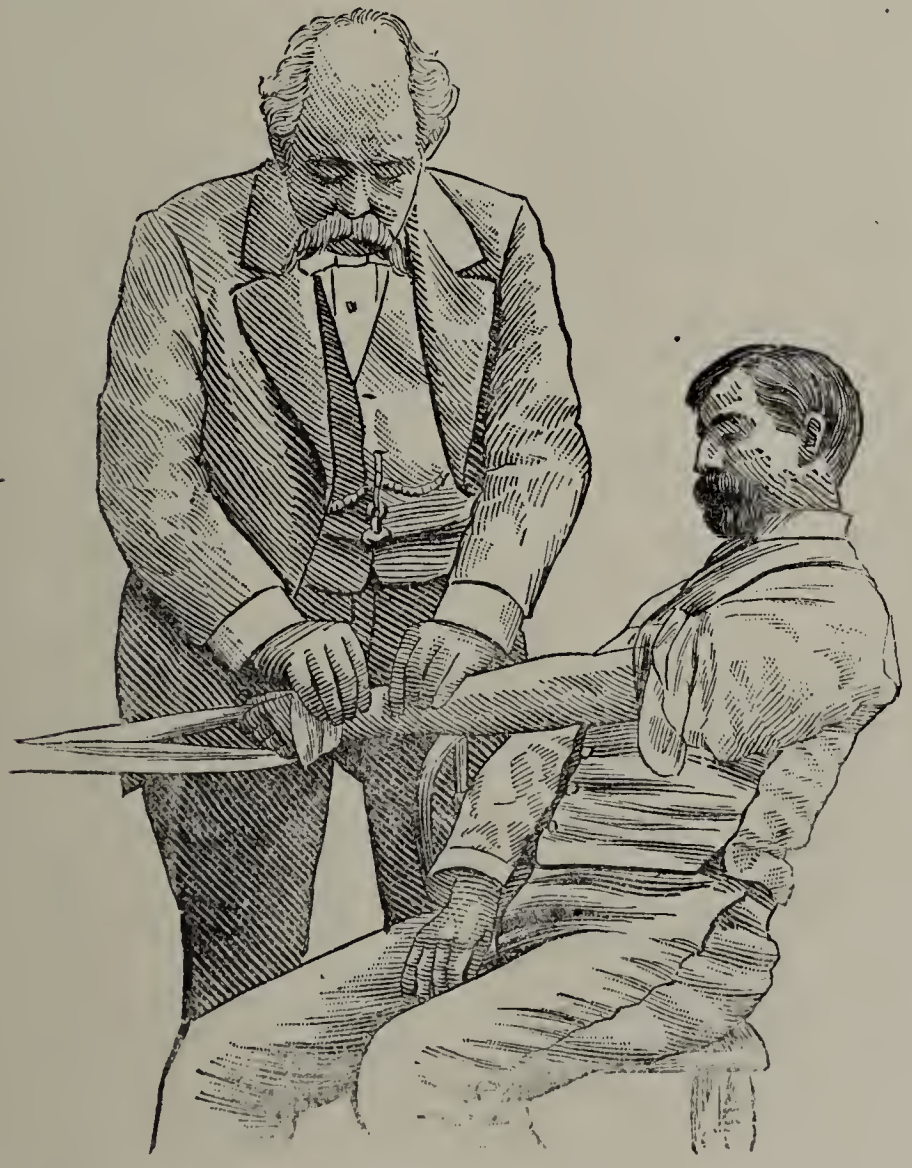
Plate VII.



and, better still, I have never had a single resulting deformity, nor a case of persistent impairment of function, where it was a simple fracture.

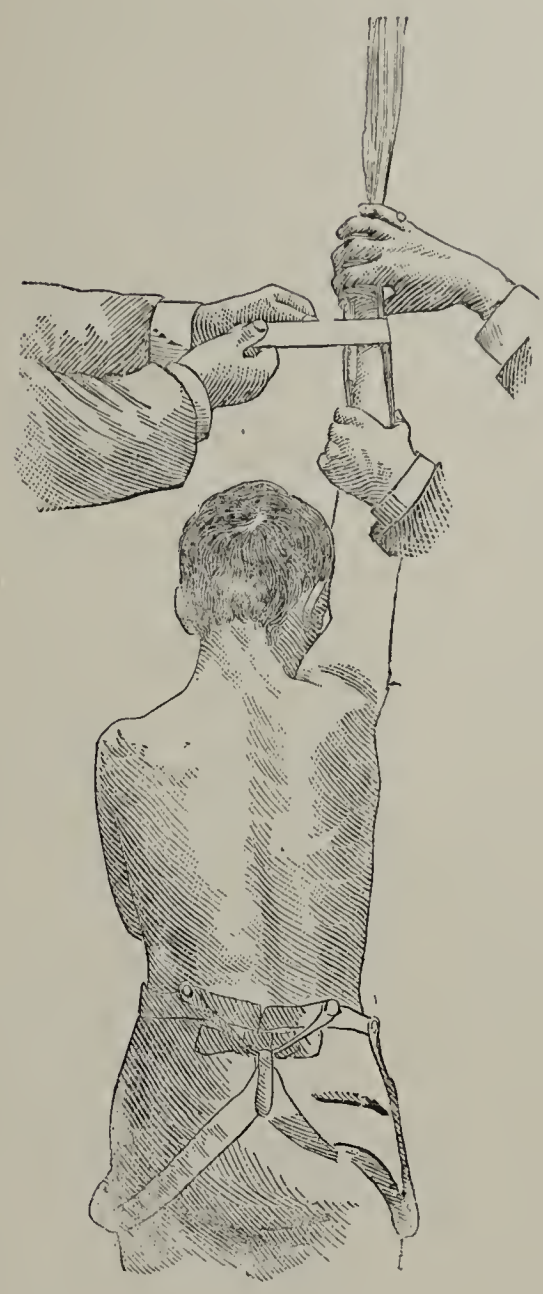
The diagnosis in this fracture is also easily made, often a glance of the practiced eye of the surgeon being sufficient to settle the question, without any manipulation of the injured member. And as the patient is most likely suffering quite enough already, I avoid as much as possible adding to his suffering by refinements of investigation, as my treatment will very likely be just the same whether the distal fragment be loose or impacted. If the accident has been of recent occurrence and there is but little swelling, the characteristic deformity is often quite apparent, and I seldom meet with much difficulty in making reduction by the method which I will now explain. I take a couple of yards of roller bandage, tie the ends together, making a loop; I lay the middle of the loop on the back of the hand; then crossing it in the palm, the patient grasps it with his fingers, as seen in Plate VII. I fasten the other end of the loop to a hook in the wall, a door-knob, or other convenient object. Now I set the patient on a chair sideways, and let him pull as much as he can; an assistant sometimes helps him to do this, as seen in the engraving. Thus extension is made, and usually the pain is much diminished in a few minutes. I however leave him seated thus for fifteen or twenty minutes, or until the muscles are quite tired and relaxed; then with my fingers and thumbs I carefully replace the fragment,

Plate VIII.



as in Plate VIII. When there is much swelling I use the vertical method of extension, for obvious reasons, Plates IX. A, X. A.

Plate IX. A



From this point the treatment is similar. My splints are very simple, made of thin wood a little wider than the arm, well padded with oakum or tow. I do not cover the padding as is generally done, as I find it easier to adapt them to the inequalities of surface without. The palmer splint reaches from the roots of the fingers to a little above the middle of the arm. I cut a place out for the ball of the thumb as it is not necessary to confine it with the splint. The dorsal splint reaches from the carpo-metacarpal articulation up to the same point on the arm as the other. When the splints have been nicely adjusted they are held in place by three strips of adhesive plaster an inch wide. I do not apply the plaster so tightly as to cause pain by pressure, as, if perfect coaptation has been effected, but little force is necessary to retain the distal fragment in position. But this is the point of the whole matter, reduction must be perfect or deformity will result, and the surgeon must not expect the splints to do by pressure what he has failed to do himself by careful manipulation when he could both see and feel what he was doing. I use no interosseous pads as they tend to spread the bones apart and thus increase the possibility of deformity, and besides there is no tendency to lateral displacement inwards.

I do not relax the extension until the dressing is completed. By that time generally the patient is pretty comfortable, and, with a piece of bandage for a sling, I let him go, directing him to return as soon as he feels that he should, so that I may tighten the

splints to follow the atrophy of the soft tissues. I very seldom require to readjust them otherwise.

FRACTURED CLAVICLE.

Plate XIII.

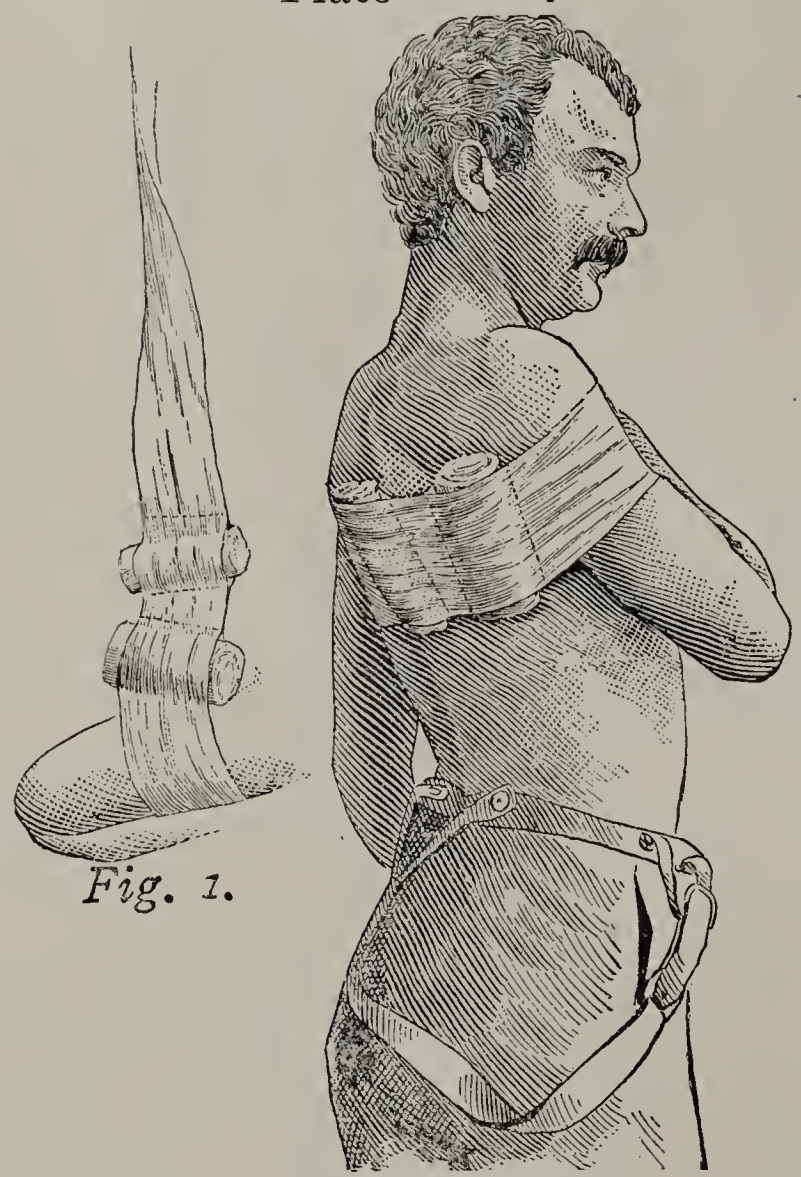


Fig. 1.

Plate XIV.



The diagnosis in this fracture is very simple. I think it unnecessary to say a word about it. When the clothing is removed we see that the arm droops downward and forward, and often the distal end of the sternal fragment is felt by the finger sharply defined under the soft tissues—often both fragments may be felt and crepitus may be easily produced by those who like such music. I do not and I never try to produce it until I have exhausted all other means of investigation. Now let us dress the case.

I recognized early in my practice the necessity of making the scapula as nearly as possible a fixture while treating a fractured clavicle, as the weight of the arm drags the acromial end downwards and the attached fragment of the clavicle goes with it, so that it requires some means of not only restoring the normal relations of the parts, but it is necessary to hold them in place during the entire period required for the reparative processes. And I think, gentlemen, that want of attention to this point will account for a very large proportion of the failures to cure this injury without deformity. I use an adhesive bandage, say four inches wide. One end of this is reflected upon itself, forming a long loop, Fig. 1. This bandage is long enough to encircle the body. I place a large roller-bandage in the loop, leaving room for the arm, and secure with pins. When ready to dress the case I slip the loop over the hand and up over the insertion of the deltoid muscle, and well up in the axilla, the roller being far enough from the arm to admit the fingers. It may even be placed against the outer border of the scapula, although that is not necessary, as there is not much tendency to displacement of this bone forwards. I now place a smaller roller, say one inch in diameter, in the loop opposite the inner border of the scapula, and corresponding to it in angle, and fasten it there, so that when the outer part of the adhesive bandage is brought to bear firmly upon and around the thorax, mischievous movements on the part of the bone are impossible. Before applying that part of the dressing permanently I raise the injured shoulder, keeping the elbow upon the lateral median line of the thorax, and secure this position by the adhesive bandage. I then take a strip of adhesive plaster, four inches wide, and long enough to reach. I cut a slit in it, placing a few folds of lint over the slit. That I place under the olecranon process, then carry the plaster up on the arm and and hand. Now I bring the arm forward in front of the body with some force as a lever. The loop bandage being the fulcrum, and thus the acromial fragment is forced outwards, and generally the bone will of itself resume its normal form and relations under this maneuver. My plaster is now carried over the shoulder of the sound side and the hand is thus secured firmly. The other end of this bandage is now carried up the dorsum of the arm and adheres to the opposite shoulder. Now the dressing is complete, although for the additional comfort of my patient, I usually cover this dressing with a nice roller bandage, applied over all. The advantages which I claim for this method are, first, I do not ligate the arm, as there is plenty of room left between the roller and the arm to prevent unpleasant embar-

rassment of the circulation, and, second, I secure immobility of the scapula, or nearly so, adding much to the chances of cure without deformity.

My dressing of this fracture looks not unlike that used by many other surgeons. But its true inwardness and essential differences are easily found on inspection. I have treated a very large number of cases of fractured clavicle by this method, and my results will compare favorably with those of any other surgeon within my knowledge. Other fractures I must leave for future opportunity.

EXSECTION OF BOTH HIP JOINTS FOR MORBUS COXARIUS.

BY WILLIAM A. BYRD, M.D., OF QUINCY, ILLINOIS.

[Read before the Surgical Section of the Am. Med. Association, June, 1883.)

Ever since the first suggestion of the removal of the head of the femur by Mr. Charles White, in 1769, for morbus coxarius, and the execution of it first by Schmalz, in 1816, as stated by Dr. Sayre, Anthony White, in 1822, as claimed by Barwell, there has been great diversity of opinion among surgeons in regard to the propriety of this operation, a few favoring, and many, condemning it as being entirely useless, claiming that even when it succeeded in saving the life of the patient, it left a miserably deformed being unable to walk without the aid of crutch or cane, and the chances of cure were no greater than if the patient was allowed to depend upon the slow process of spontaneous exfoliation of the diseased bone, a process which was rarely accomplished before the death of the patient. Opinions have greatly changed since the excisions have become numerous enough to compare with the older method. A condition brought about by various operators, and given a great impetus by Dr. L. A. Sayre, who claims the recovery of sixty-three out of seventy-two excisions of the joint. The gravity of a single excision having been considered so great, I presume but few surgeons thought there would be any propriety whatever in double excisions, though, of course, subjects requiring double excision present but seldom. I have found a record of but two cases of the kind, which you may find in the last edition of Dr. John Ashhurst, Jr's. "Surgery," p. 633. He writes: "I once had occasion to resort to excision of both hip-joints, the result (fig. 316) as regards life, was satisfactory, but the patient was not able to walk without crutches as long as he remained under my observation. A similar operation has since been performed by Mr. Croft." Now the case I have the honor to report to you is not only able to walk without crutches, but she goes up and down stairs very well without them, and attends school every day. When passing over rough ground she makes use of the crutches; traversing smooth places, without them. The accompanying photograph shows the appearance of the parts after the excision.

I will now read you a carefully written account of her condition previous to the excision, by Dr. Moses F. Bassett, a gentleman highly respected in our city:



"Susie Mahaffey, the subject of the following sketch, was born in Quincy, Ills., August 1st, 1873, of Irish parentage on both sides. At the time of her birth her father was aged sixty-five years and her mother thirty-one. The child has light complexion, pale blue eyes, flaxen hair and is of flabby texture; is of a bright, cheerful disposition, very fond of music and precocious, both physically and intellectually. She first came under my observation in February, 1876. She then had masses of enlarged lymphatic glands in the cervical and submaxilary regions, and the parotid gland of left side was suppurating profusely. She had been in this, or a similar condition, several months, and was markedly anæmic and suffering with hectic. Several irregular, and lately one regular physician had treated her with no apparent benefit. The last one had told her parents she had "King's evil," and was incurable. After a careful examination of the case, and by urgent solicitation, I undertook her treatment. I enjoined cleanliness, nutritious and abundant diet, exercise in the open air, by being drawn in a baby wagon, and gave alteratives and tonics, both mineral and vegetable, including potass. iodide. sulph quin. sassaparilla, stillingia, iron, etc.; also cod-liver oil; topically used salicylic, carbolic and benzoic acids, zinc and iodoform, and had the satisfaction of discharging her in about six months, with the abcesses healed, the enlarged and indurated glands reduced to normal size, nutrition good, getting quite fleshy, and with rosy cheeks.

From the autumn of 1876 I saw her occasionally, always looking bright and healthy, and was told by her family that she was perfectly well. More than five years afterward, on the night of March 15th, 1881, I was urgently summoned to see her, and was told she had been sick in bed with a continued fever for six weeks, under the care of one of her former physicians; that she was now in a dying condition, and the doctor in attendance had refused to treat her

longer, and said she could not recover. Found her temperature very high, with alternate rigors and sweats, and complaining of intense pain in right hip and leg. On inspection, a large quantity of pus was discovered surrounding the femur from hip to knee. This I at once evacuated, by a free incision on the outer aspect of the limb. The exhaustion following this procedure was extreme, but she finally rallied under stimulation, and slowly improved. My efforts were chiefly directed towards recuperating her sufficiently to enable her to endure the necessary operation for the removal of the necrosed bone, but not till April 27th, 1881, did I dare submit her to that ordeal. On that day my friend, Dr. W. A. Byrd, made his first operation, supplemented by a second in the following October, the particulars of which he will detail, and I leave the further history of the case to him, with the concluding remark that in more than forty years of active medical and surgical practice I have never seen results more happy and unexpected. M. F. BASSETT, M.D."

April 27th, 1881, with the assistance of Drs. Bassett and G. W. Connell, now of Johnson, Nebraska, I proceded to remove the head and upper part of the right femur. I commenced the incision two inches above the great trochanter and continued it downwards, curving it so as to pass behind the great trochanter, ending five inches below its origin. The soft parts were pulled aside and detached carefully with the periosteum, from the bone with a dental scraper—an instrument that I have of late used entirely for that purpose, an operation easily effected. The head of the bone was thrown out through the opening, and on account of the softened condition of the bone it was divided just below the trochanter major with pliers. There being an abscess over the greater trochanter of the left limb, it was freely laid open and the trochanter removed with the pliers, there appearing to be no other portion of the bone diseased. Both wounds were dressed with balsam Peru and oakum, and the child placed in one of Dr. W. P. Verity's (of Chicago) splints—a splint that I have used with excellent results in similar cases, in fact all the cases I operated upon or assisted to operate upon before using that splint died, and none have died since, but I expect one to do so that I removed the hip-joint for in the fall of 1881. She persisted in being placed face downwards in the splint, which was no disadvantage, as it tended to keep the limbs straighter. Under Dr. Bassett's immediate attention, seeing her myself occasionally, the right limb progressed favorably but the left one did not do so well.

October 10, 1881, a little over five months after the first operation, with the assistance of Drs. Bassett, Connell, and two other physicians whose names I have forgotten, I cut down on the head of the left femur as in the former operation, and removed the bone just below the trochanter minor with the pliers, and dressed the wound as before. Constitutional treatment was carefully attended to, and she received excellent nursing. From this time, her recovery was very rapid, she gained flesh, and the wound healed readily.

Now I wish to call your attention to the time supervening between the attacks and the excision of the first joint. Dr. Bassett says that he was first called to see her, for her hip trouble, March 15th, 1881, six weeks after pain had commenced. Suppuration had already freely occured. He released the pus, and the disease progressing, I removed the bone April 27th, following, a period of about eleven weeks. The other bone was left with only the greater trochanter clipped off until October 10th, a little over five months. Although she has done so well I believe she would have done better had it been removed at the same time. Most authors deprecate the use of the pliers in removing the bone in such cases, in which view I believe they are generally correct, but in this case the bone was so soft that I did not anticipate splintering.

Again I desire to call your attention to a splint that I have found so useful, first brought to my notice by Dr. Chas. T. Parkes, of Chicago, but the inventor is here and I shall ask him to show it with its application to you. Before using it, I was interested in three cases, all dying; since, in four, of which three have recovered. Many of these cases I believe originate in a tubercular condition of the bone, as so ably described by my friend Dr. N. Senn, in his report on pathology to the Wisconsin State Society, in 1883. These cases, when the disease is only in the bone and there is synovial effusion from irritation, are those, I think, cured by Mr. Macnamara, of Westminster Hospital, London, by boring with a drill a hole directly into the joint from the outer side of the trochanter major, thus permitting exit to the morbid material in the bone and relieving tension within the joint.

JUNE 7TH, 1883.

AN APPLIANCE ADAPTED TO OCCASIONAL GYNÆCIC AND OBSTETRIC EMERGENCIES.

BY HENRY A. MARTIN, M.D., OF MASSACHUSETTS.

[Read to the Section on Obstetrics and Diseases of Women, June, 1883.]

I have always thought that his gift, thrown into the treasury of the Temple of Medicine, ought not to be despised, who brought some newer and really better way than had been before devised for the relief, assuagement, or sometimes, happily, complete removal and cure of any, even the simplest, rarest, least important of the multifarious, the myriad developments and complications of disease which sow the way of our life with pitfalls innumerable, with pain and anguish and death.

I bring you a very simple matter, one not worth calling an invention. A very broad (9 inches) thin bandage of what is technically known as "pure rubber," a preparation of the very finest grade of extra Para India-rubber and the extreme minimum of pure sublimated sulphur necessary, with heat, to accomplishing the process of "curing" or "vulcanization." This bandage has been found, by others as well as myself, of great and unexpected value, now and then.

About four years since, I was asked by my friend and old fellow-student, Dr. J. S. Flint, to visit a patient of his. In all respects but one she was healthy and able, but that kept her anchored in her bed.

Several fibroid tumors were attached to the body and fundus uteri. As a consequence, whenever the patient assumed the erect position, the fundus uteri, enlarged not only by the fibroids attached to it, but by its own hypertrophy, was thrown against the extremely sensitive anterior peritonæal wall of the abdomen, producing at one point, where the tumor was most prominent, extreme, indeed quite intolerable, pain. On the "broad of her back" she was comfortable, and in no other position. All the usual varieties of abdominal bandage, supporter, swathe, etc. etc., had been tried, but found useless, increasing rather than diminishing the trouble. It occurred to me that a simple thin band of pure rubber, wide enough to cover the entire abdominal surface, and applied closely and *immediately* to the skin, without any intervening application whatever, might be borne and afford relief. I procured such a bandage. The result far more than justified my hopes. From its first application the pure rubber bandage made the patient quite comfortable, even while in the standing position. In a few days she resumed her profession of seamstress. A favorite in many good families, for fifteen months she continued to earn her living, and, to a very considerable degree, to enjoy the life she earned. At the end of that time, the tumors had so increased in size, and this increase was so complicated by hæmorrhage and other familiar symptoms, as to necessitate repose for the two or three remaining months of her existence.

During the past four years several of my friends, as well as myself, have repeatedly employed this thin wide bandage of pure rubber, and, in almost all cases in which it was judged that it might be useful, it has proved to be so, often extremely useful. I need hardly enumerate the cases in which it has proved, and may be reasonably expected to prove, more useful than any other appliance. Its perfect closeness of application to the skin, by which it becomes practically, as it were, a part of the anterior abdominal parieties, and its perfect elasticity, render it a means of great relief and comfort, not only when the gravid, subinvoluted or otherwise enlarged, uterus is thrown forward against the peritonæal wall; when tumors have the same effect, in some cases, particularly in multipara, in which the redundant and forward projecting abdomen is not only a source of chagrin but of suffering, the pure rubber abdominal bandgage has been found most useful, but also in some cases in which the uterus, though not enlarged but antesected or anteflexed, has been the source of infinite annoyance, this bandage has effected relief when all previous appliances had been of little or no utility. It is not only, however, in cases in which abdominal tumors or uterine displacements are the sources of pain and uncomfortable symptoms, but in many cases in which the abdomen was sensitive on pressure, some in which peritonitis was, doubtless incorrectly, suspected, and after labor, the bandage has been found not only a source of relief but even, it has been thought, an important means of protection from danger, in the peculiar form of pressure it exercised on a uterus prone to relaxation and dangerous hæmorrhage, or threatened, with its appendages, by inflammatory trouble. It is not only by its close application and wonderful, quite unequaled, resilient elasticity, but also by the perfect retention within it of the natural heat and of the increased fluid secretions of the skin, rendering it, after half an hour's application, a perfect poultice, stupe or fomentation; not one efficient to a certain degree, but heavy, filthy, offensive, incapable of being applied to all parts of the joint and sides of the abdomen, and probably pouring forth a perfect flood and tempest of those fearful germs which haunt the night-mares of so many of our brethern, but a poultice or fomentation affording support and comfort and protection from danger by its perfect elastic resilience and pressure of a sort which relieves, while every other pressure is utterly unbearable and out of the question. This bandage is admirably adapted to certain of those cases so fertile of misery to the patient during pregnancy; of protracted dragging, tedious delay, and misery to both patient and attendant, when labor comes on, and, indeed, then not entirely free from danger to the former. The cases I mean in which the gravid uterus is strongly, and, as pregnancy advances, more and more anteverted and more and more a source of fatigue and wretchedness.

I have occasionally inserted a soft pad of old worn towel or worn flannels, of folded old linen or lint between the bandage and the skin at the point at which it seemed desirable to increase backward pressure, but lately I have found this to be quite needless, and, in some cases, the local pressure adds to the patient's discomfort. The peculiar active living pursuing pressure of a pure rubber bandage, properly applied, dispenses with what I at first thought to be advisable.

Another obstetric and gynæcic use of this broad elastic bandage is in the treatment of adenoid tumors, and of the early stage, at any rate, of inflammatory tnmors of the female breast—an application of the principle of immediate elastic pressure which the profession owes to a very distinguished associate of ours (Dr. Bontacou, of Troy, N. Y.). Having long relinquished all but consulting midwifery practice, I have had but little experience in this employment of the pure rubber bandage, but still quite enough to convince me of its value, and I have found the very broad bandage incomparably more efficient for this purpose than those of ordinary width. As my hearers, though gynæcologists for the nonce, are, *Laus Deo*, mostly general practitioners also, I may venture to merely mention here the great use and convenience of this bandage in certain thoracic cases. As a substitute for the "jacket poultice," in pneumonia, pleuritis, contusions, etc. As a substitute for the ordinary roller bandage, and infinitely preferable to it, in fracture of ribs, in pleuritic effusion, both before and after thoracentesis, it is also a very convenient thing during and after the operation of paracentesis abdominis. During the operation it may be pretty snugly applied above the place of puncture, or, with a good deal of pressure, around the abdomen before the operation, the puncture to be made through the bandage. In two or three cases of extreme umbilical hernia it has been found very useful. In these last cases the bandage should be of greater

thickness than for many other cases. For most cases a length of 5 feet and a thickness of 28 (Stub's wire guage), but for bad cases of ventral hernia a thickness of 22, or even 20 of the same standard is advised, and a length of 6, or even 7 feet.

All the applications I have mentioned have been repeatedly made, and found useful in actual practice. Others have been suggested to my mind, such as, in certain cases, after the removal of large abdominal tumors, etc., etc.; but my object is to give you the actual results of my experience—not mere suggestions and surmises.

The principle on which the bandage is used is so simple—the indications for its use so plain and evident after the principle, and the perfection with which the bandage meets the requirements are understood—that I need say no more on that point, but as all are far wiser than any one can be, I do not doubt that you will discover all the uses of such a bandage that might suggest themselves to myself and many more besides.

Let it be distinctly understood that I recommend this abdominal bandage of pure rubber as an appliance to certain peculiar emergencies, but by no means for general use; for many, indeed for most cases, one of the usual forms of abdominal belt, or supporter, is undoubtedly preferable. The very quality of any close application to the skin, exclusive of air and inclusive of animal heat, and of the increased fluid secretions of the sudoriparous and sebaceous glands, which render the pure rubber bandage of great and peculiar value in certain cases, would render it very objectionable to a far greater number of cases in which pain and threatenings of inflammation are not present.

Nothing can well be simpler than the construction of this appliance. A bandage merely, just like those I recommend for the limbs except in being much broader, with three sets of tapes instead of only one, and in having a very slender strip of whalebone inserted in the tapes, and to prevent the wrinkling up of the bandage from motion of the body. Even with this provision, it is liable to roll up on the sides. This tendency might be obviated by inserting several slender strips of whalebone at intervals in the length of the bandage; but this would deprive it of the very important quality of perfect and equally diffused resilient elasticity, and for other reasons would defeat the peculiar end of the bandage. I provide a patient with four of the little contrivances devised for attachment to skirt supporters and certain sorts of garters, etc.—an excellent and almost costless substitute, by the way, for the same price. One of these catches is to be sewed to each of the ends of two tapes, or soft silk or cotton cords of proper length, by passing these between the thighs and attaching the catches to the bandage after it is applied, its rolling up may be prevented.

If these bandages come to be an article of commerce, such tapes, or cords and catches, would of course be supplied with them.

It may be worth saying, before concluding, that the present form of band was, on the whole, found to be the best. I devised and tested several other contrivances, all more elaborate than this. I need not trouble you with anything about them, as all were found to be open to objections from which this is free. At first I made them thicker than I now prefer. Now and then, however, in cases of bad ventral hernia, unusually pendulous abdomen, certain peculiarly projecting tumors, etc., etc., a bandage of the thickest sort (No. 20 Stub's guage) and of the greatest length (7½ feet) that I ever use is to be preferred to the bandage of No. 28 Stub's guage, and 4½ to 5 feet, which I much prefer in a very large majority of cases.

NOTE.—After the meeting of this Association at Chicago in 1877, on which occasion I first publicly announced some of the results of nearly twenty-five years' experience and study of the method of immediate elastic compression by means of the pure rubber, or, as it is since very generally called both in Europe and this country, "*Martin Bandage*" (an article now manufactured by scores of manufacturers, and sold by tens, probably hundreds of thousands annually), I received many inquiries for bandages.

I went to two prominent and very well known dealers in Boston, and offered each of them successively, gratis, all that might be gained by their manufacture and sale. When told that as small a stock as the manufacturer would take in hand would cost about $200, both declined; one candidly saying he "saw no money in the thing," the other, more politely, but more circuitously and tediously, said the same thing.

I had to engage in the manufacture myself or disappoint my correspondents. Since that time I continue it, mainly for this very important reason, that the manufacturers, although they reap enormous profits from my suggestion and invention gratis, for the most part make the bandages so vilely, of such poor and perishable and irritating material, as to do my personal reputation and the reputation of this method of treatment the greatest possible injury. Every counterfeit is called a "Martin bandage," and I am held to responsibility for its abominable, rascally, fraudulent worthlessness.

I shall certainly not again ask any dealer to do me the great favor of enriching himself by making anything of my suggestion. If, however, any of my hearers or readers should wish to try the broad bandage of pure rubber before it becomes a general article of commerce, and will write to me, I will gladly supply them with bandages of any length from 4½ feet to 7½ feet, of either of the four grades of thickness 20, 22, 24, 28 of Stub's wire gauge, and at a price, according to weight and degree of thickness, of from $2 to $3.50), and will exchange till the correspondent obtains just what he needs.

OWING to the removal of Dr. Theophilus Parvin from Indianapolis to Philadelphia, he has laid down his editorial pen. The readers of the *American Practitioner*, with which he has been so long connected, will miss his name and hand in the journal. Dr. Octerlony, of Louisville, succeeds to Dr. Parvin's editorial duties, as well as to his former position in the University of Louisville.

WHAT MEANS CAN BE JUDICIOUSLY USED TO SHORTEN THE TERMAND LESSEN THE PAINS OF LABOR.

BY JNO. MORRIS, M.D., BALTIMORE, MD.

[Read in the Section of Obstetrics and Diseases of Women, June, 1883.]

During the discussion of this paper Dr. H. C. Ghent, of Texas, said: "I have listened with much interest to the reading of this paper. It relates to one of the most interesting and important subjects that can possibly engage the time and attention of the obstetrician. I have been astonished and disappointed. The question asked by the author is a double one, viz.: 1st, shorten the term; 2nd, lessen the pains of labor. Astonished that chloroform was not even named as an anæsthetic agent. During the first years of my practice I refrained from the use of chloroform or any other anæsthetic in obstetric practice, being prejudiced against it by the teachings of the immortal Chas. D. Meigs; but for the past fifteen years I have been in the constant habit of exhibiting chloroform for the purpose of obtunding or abrogating the painful sensations of parturition, and, I am pleased to say, with the most gratifying results. I use it *intermittently*, during the *second stage*. Never carry the effects to the full loss of consciousness, unless I fear laceration of perinæum or other soft structures, in which event I do not hesitate to give it to a surgical degree. Exceptionally, I give it during the first stage, when the woman suffers much and the os dilates very slowly. Have never had a case of post-partum hæmorrhage since I began the use of chloroform. If I apprehend the least danger from this source, I always give ergot *about* the termination of the second or the beginning of the third stage. With one hand upon the hypogastric region, to *grasp* the womb and the other *within* the organ, to excite *tonic* contractions, I do not think there can be much danger from post-partum hemorrhage.

No serious laceration of perinæum has occurred since I began the use of chloroform in this branch of practice. I know, however, that lacerations do occur in the hands of the best, the wisest and the most enlightened obstetricians; still, I am of the opinion they would much less frequently occur if chloroform was used efficiently and judiciously.

Ergot is a power for good or evil, depending upon the state and stage of the labor. I never give it during the second stage, but confine its use to the third. As before remarked, I have given it just before the completion of the second stage, when I apprehended hæmorrhage, but never soon enough for the ergot to exercise any deleterious influence on the child. Wisely used, there are few medicinal agents within the wide scope of the Materia Medica that surpass chloroform and ergot.

REPORT OF TWO CASES OF CATHETERS, BROKEN OFF IN THE PROSTATIC PORTION OF THE URETHRA, REMOVED BY THE USE OF A NEW INSTRUMENT.

BY ABNER HARD, M.D., AURORA, ILL.

In the winter or spring of 1881 a Norwegian between 60 and 70 years of age, who had been in the habit of using a catheter in consequence of enlarged prostrate gland, was brought to my office, having broken the catheter in the prostatic portion of the urethra. I could not feel the catheter by external manipulation, but by passing a sound into the urethra, I discovered the end of the broken catheter in the position indicated. The catheter was what is known as a gum, or soft catheter, No. 7. Not having seen or known of such an occurrence, I confess I was at a loss as to what course to pursue. There was danger of pushing the fragment into the bladder, and I possessed no instrument constructed to meet such an emergency. It is said "necessity is the mother of invention," and calling upon my inventive powers, I took a large, straight steel wire and had a tapering screw cut on one end. Then took a common gum elastic catheter, and after cutting off the end containing the eye, used it as a sheath for my wire screw. This I oiled and passed into the urethra until it came in contact with the fragment of the catheter. Then carefully turning the wire, with gentle pressure, attempted to screw it into the open end of the broken catheter. My rude instrument was too blunt to readily enter, but after repeated attempts it entered sufficiently to admit of making traction. I withdrew the catheter about an inch, when it broke, allowing me to remove about an inch of the broken instrument. Again introducing the screw, after another prolonged attempt my efforts were crowned with success by the withdrawal of the remaining portion. The fragments removed were five or six inches long. I was assisted by Dr. White, of Steward, Ill., who brought the patient to me.

The second case occured October 6, 1882. This time I was called, in the night, twenty-eight miles from home. The telegram informed me of the nature of the case, and, armed with my screw, I responded. The patient was passed sixty years of age. The accident had occured under similar circumstances to the former, but the catheter was smaller, being No. 5. Assisted by Dr. George M. Macklin, of Waterman, Ill., I proceeded as in the former case, laboring under the additional difficulty of having a smaller orifice in the fragment to be removed. We finally succeeded, as in the first case. A portion of the catheter broke in the removal, making the operation both difficult and tedious. However, both operations were performed without injury to the patients.

Since having the foregoing experience, I have been impressed with the idea that, as soft catheters have come into such general use, accidents of this kind may become more frequent, and some better means of extraction than we have heretofore possessed is needed. I therefore had E. H. Sargent & Co., of Chicago, Ill., make me an instrument—an improvement on my wire screw. It is a metal rod, with a tapering screw, the screw being sharply pointed with sharp and deep thread, and a silver sheath armed with a plug to fill the distal end, and therefore as easily introduced as an ordinary silver catheter. When introduced the plug is withdrawn, and the screw inserted in its place. The surgeon is to manipulate the instrument so as to keep the end containing the screw

in contact with the open end of the fragment of the catheter to be extracted, changing the direction, if necessary, while an assistant gently turns the screw. When the screw enters sufficiently to admit of traction, the fragment is to be carefully withdrawn with the instrument. Since reporting these cases to our local Society, I have read in the *New York Medical Record* of April 7, 1883, the report of a case by Surgeon J. A. Wyeth to the New York Pathological Society, of an English gum catheter lost in the uretha. In that case Surgeon Wyeth attempted the removal with several different instruments, but it slipped into the bladder. He then removed it by the aid of a lithotrite. He had the advantage of the patient's being nearly paralpzed, so that he suffered little if any pain during the operation.

I respectfully offer the foregoing description, of what I think is a new instrument, to the profession, trusting that it may assist some of our brethren in an emergency, as it did me.

THE USE OF THE TREPHINE IN CHRONIC PLEURITIS.

BY J. M. G. CARTER, A.M., M.D., WAUKEGAN, ILL.

The treatment of chronic pleuritis with suppuration was very unsatisfactory, and the patients generally died with exhaustion which was termed consumption, until modern surgery offered means of relief. For many years after surgeons ventured to perform paracenticis thoracis for the relief of this class of cases, it was considered absolutely necessary that no air be allowed to enter the pleural cavity, and the ingenuity of the profession was taxed to devise instruments which would entirely exclude this agent. And even after bolder operations were undertaken it was deemed unadvisable to allow air to enter the opening. It is now known that the entrance of air into the pleural cavity mav be attended by no unpleasant results.

The operation which it is the object of this article to describe, has been slowly developed during the last quarter of a century. All the cases recorded, as far as I am aware, have been traumatic and associated with a fistulous opening ; indeed, very few cases have been reported. The present case is in the practice of Dr. O. T. Maxon, of Waukegan, and was not seen by the writer until the day of the operation.

G. S., a street car conductor, æt. 25, "took cold" in April, 1882. He had a troublesome cough, but continued at work until June 27. While lifting a car he felt a severe pain in the back, which compelled him to stop work. He lay off two months on account of lame back and during that time was treated for inflammation of the kidney. Having recovered from the lameness in the back he returned to his work and remained at his post until about September 10, notwithstanding his cough gave him considerable annoyance. At that date, in attempting to jump from his own to a passing car, he struck his side (at the seat of the abcess) on a car seat. During all these weeks, however, the pain in the back had not entirely subsided, and he was rather feeble, but had a fair appetite.

The injury compelled him to leave his worR again, and it was two weeks before it was considered well, and he returned to work. In about a month the pain in the back, in the lumbar region, and the cough became more troublesome, and November 3, 1882, he was forced to leave his car. He had already been suffering from night sweats some two weeks. He was unable to do anything, and a part of the time confined to his bed until December 11. On that day he began work again, but after half a day's effort he was compelled to leave his car and went to bed.

He came under the care of Dr. Maxon, December 23, 1883, at which time the patient said he had had a troublesome cough for a month or more with night sweats. Most of the time his appetite had been poor, but at times it was good. He complained of pain in the right pleura. Pulse 120 and temperature 103 (Fah.) Prescribed quinine and opiates. The pain and night sweats continued about the same for the next month, the temperature ranging from 100° 105°. There were sixteen to thirty-two ounces of muco-purulent sputa expectorated in the twenty-four hours. Quinine and iron were freely given, but the patient received little if any benefit from the treatment. Other remedies were used, but the case seemed to be beyond the reach of medicine, and the doctor determined to resort to surgery.

February 11, 1883, an opening was made into the pleural cavity between the fifth and sixth ribs. A large pus sac was entered, which discharged about one pint of fœtid pus. The sac was then washed out by the injection of a one per cent. solution of carbolic acid. This solution was freely expectorated by the patient. During the next ten days there was little or no cough, the temperature became normal, and the patient reported that he could "eat like a railroad hand." He slept much better. As the wound began to heal, his symptoms grew worse, and it was necessary to dilate the opening. At first this was done by introducing rolls of linen. Cough became worse gradually, and it became evident that this method of procedure was not sufficient to keep up the discharge. The cough, night-sweats, pleural pain and other symptoms were as bad as ever by March 20. As the discharge was practically stopped at this time, the opening was enlarged by incision. The operation was performed with difficulty, from the fact, chiefly, that the sac was not adherent to the thoracic wall. The discharge of pus was considerable, and was kept up with great relief to the cough, until May 1. After that date no flow could be obtained, even by dilatation of the opening, and patient and friends alike feared the further use of the knife. Tonics and anodynes were administered during the following three months, but the patient steadily and gradually failed, growing weaker and more emaciated. During these three months he was not able to lie down, on account ef the distressed breathing and harassing cough which the reclining posture caused. He expectorated about 32 ounces of pus in each 24 hours. His appetite was almost entirely destroyed by the nausea which was caused by the offensive odor of the sputa. The patient seemed to be slowly dying, and as a last hope, it was advised that he should be operated upon again,

with the hope that a free opening might be secured for the discharge of the abscess, and to facilitate the necessary local treatment.

Accordingly, preparations were made for trephining the thorax, and Aug. 8, 1883, was selected as the day for operating. The condition of the patient was such that it was an hour after reaching the house before the operation could be commenced. The pulse was 120, and the temperature a little above normal, the cheeks flushed, the patient weak and much emaciated, and the cough so distressing that it was necessary to give ether to quiet it sufficiently to allow surgical interference. At 11 A. M., the patient sitting in a rocking-chair, the administration of ether began, but it was 11:15 before he was sufficiently under the influence of the anæsthetic to bear the knife.

With a scalpel, an incision three inches long was made along the superior edge of the sixth rib. The periosteum was removed and the trephine applied. An inch and a half of the bone was cut away, except about one quarter of the rib on its inferior edge, which was left as a support to the chest wall. The scalpel was then used to cut through a layer of earthy deposit ¾ of an inch thick, between the wall and the pus sac. This deposit was so hard as to break the edge of the knife, and leave it almost as rough as a saw. When the pus sac was reached, a very offensive discharge began, which flowed more freely after the injection of a one per cent. solution of carbolic acid. About two pints of this offensive pus were discharged before the wound was dressed. Carbolic acid water, of the strength of one per cent., was freely injected, one of Dr. Edmund Andrews' drainage tubes was inserted, and the patient was given gr. ¼ of morphine to produce rest. The dressing consisted of a simple bandage, over carbolized cloths. During the dressing, the patient had one spell of coughing, which distressed him very much. The air was drawn through the opening in the side, and when he coughed, the pus was thrown out to the distance of several inches.

After the operation was completed, and the dressing applied, as the patient came out from under the influence of the anæsthetic, it was seen that he was very weak. In a few hours he rallied, however, and during the afternoon walked across the room. After the dressing was applied, he ceased coughing, and has not had a recurrence of it since. He was given tonics and anodynes, the latter of which have been constantly and gradually diminished. His appetite has steadily improved, he has no distressed breathing, and sleeps well in the reclining posture, which he had not done for three months previous to the operation. The discharge still continues, but is not so offensive, and is less in quantity. The pulse and temperature are about normal.

The operation occupied an hour, and it will be observed that no special antiseptic precautions were taken, further than carbolizing the instruments and sponges. The offensiveness of the pus can scarcely be imagined. The odor was such as to nauseate the attendants, and almost drive them from the room; and it so permeated the air that the smell was strongly perceptible in the yard.

It is evident from this, and similar operations by other surgeons, that the introduction of air into the thorax through an opening in the parieties is not greatly to be feared under these circumstances.

P. S. Aug. 23.—The patient rode out in his buggy yesterday, and to-day came to the office, a distance of four miles, and walked upstairs (25 steps) with very little fatigue. He took dinner with Dr. Maxson, and ate very heartily. His pulse and temperature are normal.

It is now just two weeks since the operation. He does not cough, and has had no return of the hæmorrhage from the lungs which was so profuse the day before the operation was performed (expectorated ½ to one pint of blood). The cavity, which held a quart of water two weeks ago, now will admit only eight ounces. The drainage tube was removed and shortened two inches, the result of which was the relief of a sensation of pressure and slight pain under the right shoulder. The sensation of lack of air in the right lumg—the affected side—has disappeared, and he breathes naturally. He walks about the yard and premises, and rides whenever he desires. His appearance is very much improved, and all the indications are that the cure is radical.

MEDICAL PROGRESS.

Stewed Fruit for the Gouty and the Dyspeptic.—Dr. J. Milner Fothergill, in the *Lancet* for July 7, recognizes that for many persons, gouty, dyspeptic, and glycosuric, ordinary stewed fruit is objectionable from the amount of added sugar it contains. But it is by no means necessary to render stewed fruit objectionable by adding much sugar to it. Deprived of this excess of added sugar, stewed fruit can not only be rendered unobjectionable, but be converted into an actual prophylactic measure, especially in cases of lithiasis. In order to attain this end all that need be done is to neutralize the excessive acidity by an alkali, and then little or no sugar is required. Dr. Fothergill experimented in this way, through his cook, on all the ordinary native fruits, and found that for each pound of fruit as much bicarbonate of potash as would lie upon a shilling (quarter) was all that was necessary. With all fairly ripe fruit this was just sufficient to neutralize the acidity and bring out the natural sweetness; indeed the resultant product was quite sweet enough for most adult palates. Such stewed fruit could be eaten alone, or with milk puddings, or with cream, or the Swiss milk in bottles. Gooseberries, currants of all kinds, apples, and plums, all alike were excellent when so prepared. With dark fruits, however, as the black plum, the color is impaired by the alkali; a little cochineal will remedy this. Where there is no natural sweetness to neutralize the acid completely by, an alkali leaves nothing, simply a cold mass, to which the palate is absolutely indifferent. Such is the case with rhubarb. Here it is well to use half or all the amount of alkali with some sugar. The same is the case with early gooseberries before they have any natural sweetness. Here the full quantity of

alkali should be used, and the remaining acidity met by sugar. Where three-quarters of a pound of sugar is required to sweeten one pound of fruit, only one-quarter of a pound of sugar is necessary after the alkali has been added. The sour-sweet taste is thus secured, which is toothsome. Fruits *en naturel* as the strawberry for instance—are good in gout from the salts they contain, and are unobjectionable stewed, if it were not for the acetous fermentation of the added sugar. Here soda may be used. But where there is lithiasis the alkali ought to be potash. The gouty and the bilious alike are troubled with the products of the metamorphosis of albuminoids. Neither the lithates of the gouty nor the bile acids of the bilious are derived from the saccharine or farinaceous elements of the food. Milk puddings and stewed fruit are excellent for the dyspeptic, the bilious, and the gouty, and for one of those who suffer from taking sugar, nineteen would be all the better for stewed fruit. It does not seem a matter of indifference in lithiasis what forms of albuminoids are taken. The flesh of animals is rather converted into peptones by pepsin in an acid medium—that is, by gastric digestion,—than by trypsin in an alkaline medium. And such peptones seem specially liable to form lithates. Caseine is more specially digested by trypsin in the intestine, and such caseine peptones seem less readily converted into lithates. Caseine is the form of albuminoids, it seems to me, best suited to the gouty. Both for the classical diabetic and the glycosuric, cane sugar—the sugar of commerce—is bad, producing the unpleasant symptoms of sugar in the blood very readily. Yet many glycosuric individuals can take farinaceous matter with comparative immunity from discomfort. Starch in its way to grape-sugar is much less troublesome than is cane sugar passing into grape sugar—why I do not know, but the fact remains. Fruit stewed in the manner here advocated saves the gastric acidity from the acetous fermentation of the sugar in the dyspeptic, or with the glycosuric relieves him from the excess of cane sugar which disagrees with him. Where there is distinct gout, if stewed fruit be prepared with the bi-carbonate of potash, it is converted into a therapeutic agent of no mean value.

A CASE OF BEAD-SWALLOWING.—The *Lancet* for July 7 gives us a case where a child of 18 months swallowed and then passed with the fœces 70 glass beads, hexagonal-sided, measuring each about three-tenths to one-fourth of an inch in length, and about two-tenths of an inch in diameter. The edges of the beads were sharp and ragged. Also an ordinary horn coat-button, three-quarters of an inch in diameter. No bad symptoms showed themselves, no medicine was given, and it took the child three days to dispose of them comfortably. There were none of those symptoms noted, so minutely detailed in a somewhat similar case, by Jack Hopkins, for Mr. Pickwick's benefit.

MYCETOMA OF THE FOOT.—This interesting condition, as given by a case recorded by Surgeon-Major G. Bainbridge, in the Trans. Med. and Physical Soc. of Bombay, No. 11, New Series, shows that this fungous growth may infect the whole system. Another fungus disease has been described by Dr. E. Parpek, in his pamphlet, "The Actinomycosis of Man," but the two forms are not closely alike.

The disease occurred in a native in government employ, aged 22 years, and dated back eleven years, when the bare foot was injured while walking, resulting in swelling, and the discharge of blood and pus from an opening in the left foot near the metatarso-phalangeal articulation, which healed in a month's time. Three years later the wound re-opened, and discharged as before, with the addition of white grains in the discharge. Since then the limb has never been well, and during the past year and a half the disease has advanced rapidly. At present, the left foot is considerably enlarged, and has fifteen orifices or sinuses, and cicatrices of former openings on its surface; they are limited to the tarsus and metatarsus, the phalanges being sound. At the inner side of the calf of the leg, between the upper and middle third, is a tumor of an elongated ovoid, or fusiform shape, lying free beneath the skin, of softish, elastic consistence, painless, and presenting no signs of an inflammatory state. Superficial inguinal glands are much enlarged, tender, and orifices in their neighborhood discharge bloody pus in quantity, with the roe-like particles. Tumor in the left calf was excised, and proved to be a cyst with a rather firm fibrous wall, from ⅛ to ¼ inch thick, containing a synovia-like fluid and numerous yellowish-white, fish-ova-like particles, characteristic of the pale variety of mycetoma. The cyst was composed of very compact fibrous tissue, containing in its meshes a considerable number of fat globules, and the contained processes and roe-like bodies consisted of an extremely delicate fibrillo-membranous basis, containing in its meshes minute spherical cells and very numerous oil-globules. The fibrillar structure had a radiated arrangement around numerous centers, so that the whole seemed to consist of concentric spheres of varying density, composed of radiating fibrillation, cells, and fat globules. The growth measured about 2½ inches by 1½.

OVARIOTOMY IN A GIRL OF EIGHT AND A HALF YEARS OF AGE.—Dr. Duchamp, in *La Loire Médicale*, July 15, describes a successful operation performed after anæsthetizing the child while asleep, and resulting in the removal of the left ovary with the greater portion of the fallopian tube. The operation took three hours for its performance, and perfect relief was the result.

SPONGE GRAFTING.—Surgeon-Major T. Cody, Trans. Bombay Medical and Physical Society, of Bombay, No. 11 new series, has had occasion to use this method in a case of carbuncle where, after the slough had detached itself, an excavation was left two and a half inches long by two broad, and varying in depth from a quarter of an inch in parts to an inch in others. The carbolized sponge was fitted almost exactly in the parts. To retain it in close apposition three silver wire sutures were applied. In four days'

time the sponge was firmly imbedded or grafted on the surface, so the sutures were removed. Repeated carbolized washings and dressings were employed with removal by the scissors of such parts of the sponge as projected, from time to time, until in six weeks' time the patient left the hospital with the surface completely healed over, and without the slightest puckering or depression to be seen in the cicatrix.

Excessive Sweating of the Hands and Feet.—In the September number of the American edition of the London *Lancet*, Dr. Frederick H. Anderson directs the sweating members to be well soaked twice a day in a solution of two drachms of chloride of ammonium and four drachms of carbonate of sodium in a pint of warm water. The sweating hands or feet should be kept in the warm solution until the skin is somewhat like the washer-woman's hand. Then wipe off the water, and rub them well with an embrocation, composed of tincture of iodine one drachm, camphorated soap liniment and glycerine each a drachm and a half, and compound liniment of belladonna one ounce. He claims for this treatment a speedy cure.

Treatment of Psoriasis.—In the same number of the *Lancet*, Dr. R. H. Peterson mentions a case of inveterate psoriasis, of fifteen years standing, cured in a few weeks by the application of an ointment composed of vaseline, oxide of zinc, and sanitas oil. The last mentioned ingredient was regarded as the efficient part of the prescription. It is worthy of further trial.

Cure of Piles by Hypodermic Injection.—In the Peoria *Medical Monthly*, for August, Dr. Wm. H. Veatch, of Carthage, Ill., briefly narrates six cases of well-marked piles or hæmorrhoidal tumors of a chronic character, all of which he treated with entire success by hypodermic injection of carbolic acid into the tumors. The solution used varied in different cases from equal parts of carbolic acid, glycerine, and water, to equal parts of carbolic acid and water without glycerine. He sums up his experience in this mode of treatment as follows: "In the past nine years I have treated many cases as severe as the ones reported, and I wish to say for the benefit of my extremly fearful brethern, that I have never seen a case of either peritonitis, embolism, or pyæmia, follow the treatment of any case, neither have I seen serious suppuration or ulceration result from treatment." This is probably all true, and yet such results may have been seen by others, and may yet happen in the practice of Dr. Veatch.

Medical Legislation. — The following law to regulate the Practice of Dentistry in the State of Missouri, was recently passed by the Legislature of at State. It shows another step in advance by a State Legislature. The time is not far distant, however, when all our legislative bodies will find it as necessary for them to define what shall constitute an education, either in general medicine or in dentistry, sufficient to entitle a candidate to receive a diploma, as it is to require the candidate proposing to enter upon practice to be in possession of such a document. The following is the law;

"*Be it enacted by the General Assembly of the State of Missouri, as follows:*

"Section 1. It shall be unlawful for any person to practice dentistry or dental surgery in the State of Missouri without first having received a diploma from a reputable dental college or a university duly incorporated or established under the laws of some one of the United States or of a foreign government: *Provided*, That nothing in section 1 of this act shall apply to any *bona fide* practitioner of dentistry or dental surgery in this State at the time of the passage of this act: *And provided*, That nothing in this act shall be so construed as to prevent physicians, surgeons, or others, from extracting teeth.

"Sec. 2. Every person who shall hereafter engage in the practice of dentistry or dental surgery in this State, shall file a copy of his diploma with the clerk of the county court in the county in which he resides, and in the city of St. Louis with the city register, which copy shall be sworn to by the party filing the same, and the clerk shall give a certificate of such fact, with the seal of the county court attached thereto, to such party filing the copy of his diploma, and shall file and register the name of the person, the date of filing, and the nature of the instrument, in a book to be kept by him for that purpose, and as a compensation for his services, the said clerk, for filing and registering the same, shall receive a fee of one dollar, to be paid by the person filing the diploma.

"Sec. 3. Every *bona fide* practitioner of dentistry and dental surgery residing in this State at the time of the passage of this act and desiring to continue the same, shall, within ninety days after the passage of this act, file an affidavit of the said facts with the clerk of the county court of the county in which he resides, or with the city register of the city of St. Louis, if he resides in the city of St. Louis; and the said clerk or register, as the case may be, shall register the name of, and give a certificate to, the party filing the affidavit, in like manner and of like effect as hereinbefore provided, and for such services shall receive a fee of one dollar, to be paid by the party filing the affidavit.

"Sec. 4. All certificates issued under the provisions of this act shall be *prima facie* evidence of the right of the holder to practice under this act, which right it shall be incumbent upon the holder to prove under all prosecutions under this act.

"Sec. 5. Every person violating any of the provisions of this act shall, upon conviction thereof, be deemed guilty of a misdemeanor, and be punished by a fine of not less than twenty-five, nor more than two hundred dollars for each offense; and all fines so collected shall belong to and be paid into the common-school fund of the county where the offense was committed."

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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CONTRACT PRACTICE AND ETHICS.

TERRE HAUTE, Ind., J—— 21, 1883.

DR. N. S. DAVIS, CHICAGO, ILL.

My Dear Sir: At the risk of appearing intrusive, I write to ask your views relative to a case that has come before me as a member of the Board of Censors of our County Medical Society. It is this: A gentleman, a member of the "Esculapian Society of the Wabash," and permanent "Member of the 'American Medical Association,'" through having been a delegate from the Esculapians, now desires to become a member of our local society. To his admission some opposition is developing, chiefly upon the ground that he is the physician of a railroad company, under contract. Now, I find that previous to 1877 there was an "ordinance" of the American Medical Association forbidding contract practice, under penalty of loss of professional character; but that in that year, on motion of yourself, the preamble and resolution on contract physicians was stricken out by unanimous vote, on the ground of their uselessness.

May I ask, What were the reasons leading to this action? Was the "ordinance" useless because of referring to a subject which could already be referred to the code of medical ethics, or was it useless as being impracticable and incapable of enforcement, or was it the remaining alternative, i. e., that the Association does not disapprove of its members entering into contracts with railroads or other corporations?

I do not wish to extend this letter, and shall not, therefore, express my views relative to the question, any further than to say that I find myself in considerable perplexity of mind, and feel the need of the assistance of some one who has had this question already under consideration.

May I ask, therefore, my dear sir, your views, and the reasons governing the American Medical Association in the action just referred to?

I remain, with great respect, yours truly,

J. P. W.

Substantially the same questions propounded in the above letter have come to us so many times, that we feel justified in giving them a public answer. The, so-called, ordinance referred to as repealed in 1877, was in the following words:

"WHEREAS, The contract system is contrary to medical ethics,

"*Resolved*, That all contract physicians, as well as those guilty of bidding for practice at less rates than those established by a majority of regular graduates of the same locality, be classed as irregular practitioners."

This brief preamble and resolution was offered and adopted on the last day of the session of the Association in New Orleans, May, 1869.

The terms "contract system" and "all contract physicians," were so general, that they were found difficult of practical application; and in the second year thereafter, led to the adoption of a resolution offered by Dr. W. R. Finley, of Pennsylvania, asking of the Committee on Ethics a more definite interpretation of ethical rules involved. At the meeting in Philadelphia, 1872, the Committee on Ethics, consisting of Henry F. Askew, of Delaware; S. D. Gross, of Pennsylvania; Calvin Seavy, of Maine; J. K. Bartlett, of Wisconsin; and N. S. Davis, of Illinois, made the following report: "That members of the profession hired by the month or year for definite, stipulated wages, by individuals, families, railroad or manufacturing corporations, or any other money-making institutions whatever, for ordinary medical and surgical practice (always excepting benevolent and eleemosynary institutions, and medical officers of the Army and Navy), are to be classed as 'irregular practitioners,' and thereby disqualified for membership in this Association, or in a county or city Society." This report, instead of being adopted by the Association, was on motion referred to the several State Medical Societies. [See Transactions, Vol. 23, p. 55, 1872.]

Here the matter rested until 1874. During the annual meeting of the Association in 1873, a resolution was adopted instructing the members of the Judicial Council, acting as a committee, to report, at the next annual meeting, concerning the revision of the Code of Ethics. In obedience to this instruction, the committee reported at the annual meeting in Detroit, in June, 1874, on the general subject of revision. [See Transactions, Vol. XXV, 1874, pp. 28, 29, 30, 31, 32, 33.] In regard to this subject of

contract, the report contains the following: "To govern the matter of compensation the Code of Ethics simply gives us the following general declaration: 'Some general rules should be adopted by the faculty in every town or district, relative to pecuniary acknowledgments from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.' The aim appears to have been to allow of sufficient variations in the rate of compensation to accommodate the varying habits and circumstances of different communities; and yet to bind each individual to an honorable compliance with the general rules established by his professional brethren. Such being the correct ethical principle, the difficulty consists in tracing and maintaining clearly its practical application. That the principle laid down in the paragraph just quoted, is inconsistent with all contracts or agreements to attend individuals, families, companies, corporations, or any associations or institutions other than those of a strictly charitable character, for a special sum per month or year, without regard to the amount of medical service that might be required in the time specified, no one can reasonably doubt. It seems to us equally inconsistent with the ethical rule, to enter into a contract with a manufacturing company to attend their employés, or with a school to attend its patrons or scholars, for a fixed sum per annum, to be derived from a levy of a certain percentage on the wages of the employés or on the tuition fees of the students; for however plausible may be the humanitarian idea of securing for the employé or student adequate medical attendance when sick, at the smallest average cost, the practical working of the system violates both the rule that compensation for medical services should be in accordance with the kind and amount of services rendered, and that every individual and family should be free to choose their own medical attendant without dictation or indirect restraint." On motion of Dr. J. H. Van Deman, of Tennessee, the report from which the foregoing lengthy extract is taken, was unanimously adopted by the Association.

Inasmuch as the action of the Association in referring the subject of *contract practice* to the several State Medical Societies in 1872, and the subsequent action in adopting the report from which we have just quoted in 1874, had fairly superceded the preamble and resolution, adopted in 1869, the continued publication of the latter under the head of "Ordinances" was only calculated to mislead the reader. It was for that reason I moved its omission from the list of ordinances, which motion was adopted at the meeting in 1877. Our correspondent and all others interested will find in the paragraph here quoted from the report of 1874 all that relates to the compensation for medical services in the Code of Ethics, and the action of the Association regarding it, now in force, so far as relates to contracts with individuals, families, or any kind of money-making corporations or institutions.

To prevent erroneous inferences, however, it is necessary to note that both the clause from the Code and the explanation copied from the report, relate exclusively to compensation for ordinary medical and surgical practice; in other words, direct attendance upon and treatment of the sick and injured. But railroad companies and many other corporations have very important interests to serve and protect which require the aid of medical and surgical science and skill wholly independent of direct attendance on individual patients. And it is highly proper for them to employ a competent medical officer or superintendent to advise in regard to the sanitary condition of their cars, stations, workshops, etc., and to promptly attend whenever important accidents occur to see that proper arrangements are made for the care of the injured, to note the kind and extent of injuries, and if any injured are destitute of means for helping themselves to see that they are professionally provided for, and finally, to aid the company in settling, on a just and fair basis, all claims for damages. These are all duties that no one except a competent medical man can perform. And we see no reason why it is not as proper for a railroad or and other corporation to appoint a medical officer for these duties and pay him a salary, as it is to appoint and salary a superintendent of machinery. Such a medical officer, performing his duties in an intelligent and honorable manner, would not trespass upon any rule of etchics or interfere in any degree with the rights of his professional brethren in the practical performance of their duties, nor with the right of every patient to choose his own medical or surgical attendant. But he might be of great service as an intelligent adviser to all the other parties concerned. There is a clear line of distinction between such a medical officer and his duties, and that of a medical man contracting to give personally ordinary attendance upon the sick for a fixed sum per month or year; as there is also between the appointment of such an officer by a corporation and the payment of a fair salary as in the case of any other officer, and that of employing some medical man to attend to sick employés for a stipulated sum not dependent on the amount of service actually rendered, and levying a

per centage on the wages of all the employes to pay it.

YELLOW FEVER.—On the sixteenth of August Surgeon Owen, in charge of the medical department of the naval station, Pensacola, reported to the Surgeon General of the Navy that two well marked cases of this disease had occurred among the Marine Guard and had been sent to the Naval Hospital. The authorities of the city of Pensacola immediately established quarintine and a cordon for preventing all intercourse with the naval station and hospital. Commander Welch received instructions to transfer the Marine Guard to Cape Ason, six miles from the navy yard, for isolation. Active measures have been taken by the co-operation of the proper authorities, both at Washington and Pensacola, to prevent the spread of the disease. Yet new cases have continued to occur in the navy yard and hospital. Dispatches of the 29th inst. state the whole number of cases up to that date to be twelve, and six deaths. Among the latter are Surgeon Owen and Paymaster Brown. The same dispatches of the twenty-ninth of August state that the city of Pensacola, with a population of 10,000, remained entirely free from the fever and in a healthy condition. We have thus far seen no mention of any particular source from which the members of the Marine Guard, first attacked, received the infection. There are no present indications of the yellow fever either at New Orleans, Ship Island, or other Southern ports. Small-pox continues to linger in New Orleans, there having been sixteen deaths from it during the week ending August 11, 1883.

EPIDEMIC CHOLERA.—This disease appears to be slowly declining in the number of cases, both in Egypt and India. A few cases have occurred in Beyrout, Syria. M. Pasteur's investigation corps had arrived at Alexandria on the 16th of August.

We ask the attention of our readers to the following communication:

WAR DEPARTMENT,
SURGEON GENERAL'S OFFICE.
WASHINGTON, D. C. Aug. 28, 1883.

PROFESSOR N. S. DAVIS, EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, No. 65 RANDOLPH STREET, CHICAGO, ILL.,

SIR:—Congress having appropriated a small sum for furnishing special surgical appliances to those disabled in the military or naval service, your co-operation is respectfully invited in order that this relief may reach the class of persons intended to be benefited.

This office is desirous of obtaining authentic information regarding all existing cases of severe and unusual injuries. Should you have occasion to report such, it will be found useful to bear in mind the following points:

1. As no money commutation is authorized, only such cases need be presented as offer a fair prospect of being relieved by surgical or mechanical appliances.

2. Artificial limbs and apparatus for disabled limbs being otherwise provided for by law, the injuries here in view are almost exclusively those affecting the head, face or trunk.

3. As trusses are furnished under special legislation hernia, when not complicated with other injuries, is not to be understood as covered by this appropriation for special appliances.

4. As the appropriation is small, it is proper that it be expended only on the most meritorious cases. It is therefore not intended to furnish appliances which are ordinarily within the means of the individual, nor those that are of a character so perishable that it would be difficult to keep up the supply. Regard is to be had chiefly to the severity of the injury, and the ability of the sufferer, unassisted, to procure relief.

Very respectfully, your obedient servant,

C. H. CRANE,
Surgeon General, U. S. Army.

DOMESTIC CORRESPONDENCE.

TREATMENT OF PROLAPSUS ANI.

(For THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.)

In recent cases of prolapsus ani in young children, from the age of six months up to six years, the plan of treatment which has been adopted by me with uniform success is as follows: After each evacuation of the bowels, and when prolapsus has taken place, the nurse is instructed to carefully reduce the prolapsus, and to immediately inject into the rectum from two to four ounces of cold water containing from twenty drops to half a drachm of the fl. ex. hammamelis. This is continued from day to day until the parts are restored to health, which usually requires from one to four weeks.

During treatment if the bowels become constipated they should be regulated by an occasional dose of castor oil or some other mild laxative, and, in the meantime, all exciting causes must be removed, and the patient's general health carefully looked after.

J. F. JENKINS, M.D.

TECUMSEH, Mich.

RUPTURE OF HYDATID TUMOR INTO THE PERITONEAL CAVITY, WITH RECOVERY.

August 25, 1883.

This case is reported for its rarity, in fact non-precedence, as far as we are able to ascertain.

E. C., age 43, American, county sheriff. Some three years ago this gentleman called upon me for relief from an alleged scrotal hernia of the right side. Examination disclosed the disease as an in-

durated testicle. He had pain in the right lumbar region, which was attributed to the supposed hernia; this pain had at intervals annoyed him for several years, during which time its true source had escaped detection. Previous to his call upon me he had noticed an enlargement in his right side, which had slowly increased in size, and which, in connection with resulting symptoms, was the occasion of his seeking aid. He was slightly jaundiced, with loss of appetite and tenderness of the hepatic region, the latter much aggravated by turning while in a recumbent position. The patient was not confined to his bed, but was conscious of a progressive debility and steady increase of the symptoms described. At the lower border of the ribs upon the right side, and evidently attached to the inferior surface of the liver, was found a tumor about the size of an orange; it was tense at times, at other times more yielding and slightly tender under manipulation. At this time Dr. Fletcher, of Lisbon, Iowa, a relative of the patient, was called to visit Mr. C. as consultant; whereupon it was agreed that our patient was suffering from a hepatic growth, and, aside from counter irritants and strict quiet being enjoined, little else was advised, and a specific diagnosis was reserved. Under these conditions our patient slowly improved, the tumor seemed to partially subside, and he resumed his official duties until January, 1882, when, after unusual exposure and exertion in the arrest of a criminal, the lumbar pains returned. The tumor again became prominent, and, in an aggravated form, all the former symptoms reappeared. The symptoms were all reasonably attributable to pressure of the growth upon adjacent parts. No rigors pointing to abscess, no cancerous cachexia, the long duration of the disease also excluding the theory of malignant disease or obstructed gall bladder. Hydatid disease was diagnosed as the probable difficulty, and early puncture the only recourse.

Dr. Fletcher was again requested to see the patient, who, with my friend Dr. N. Bryant, of this city, met me in the case. To verify the diagnosis, it was determined to obtain a specimen of the contents of the tumor by using an ordinary hypodermic needle. The growth extended nearly to the umbilicus, and to steady it, Dr. F. firmly compressed its area, and upon introducing the needle, the barrel of the instrument at once filled with a clear, spring-like fluid. Immediately upon the withdrawal of the needle, the patient complained of an acute pain above the pubes, some distance below the location of the tumor. The pain rapidly increased in intensity, in spite of an anodyne and fomentations. It becoming evident that our patient was suffering from no ordinary complication, rupture of the cyst was suspected, whereupon an examination fully verified the apprehension, as the tumor had wholly disappeared. To abbreviate the history of the case during the next four hours, it needs only to be stated that during this time the patient seemed any moment likely to succumb from shock; deep lividity of surface; pinched features; extremities cold; pulse absent. During a period of five hours, he received four grains of morp. sulphas hypodermically, also two injections of tinct. opii of ℥j each. No approach to narcosis apparent. Warmth and fomentations were of course employed. The abdomen was tense and hard, but not swollen. After four hours, the terrific pain began to yield, the natural color returned, and the pulse improved. The specimen of fluid obtained from the cyst contained no albumen, and was beyond question hydatid. Its bland, unirritating character favored its rapid absorption by the peritoneal sac, thus helping to save our patient. There is unbroken uniformity in the testimony of authorities as to the invariable fatality of rupture of such a cyst into the peritoneal sac. Gross says unconditionally, that it is fatal. May not the rapid antidotal effect of opium as secured by its heroic hypodermic use, account for success, when, were we to use it per orem, the time required for its effect would prove a fatal delay? Perhaps we do not fully appreciate this advantage of hypodermic medication. Some local tenderness over the former region of the tumor continued for a time, as the result of inflammation in the torn sac. The attendant symptoms rapidly subsided, and now, about one year from the date of the accident, Mr. C. is free from any sign of the trouble, and enjoys a state of health unprecedented in excellence for many long years.

N. C. Markham, M.D.

Independence, Iowa.

BITES OF SERPENTS.

In the article on the Medical and Surgical Practice of the Aborigines of America, contributed by F. Andros, M.D., and published in your issue of Aug. 4, it is stated that some tribes apply the bruised wild onion for the stings of bees and wasps. I am not aware that any similar practice has been recommended in the literature of our profession, though the juice of the common onion is an excellent application for this purpose. It should be thoroughly applied to the wound immediately after the sting has been received. It acts as a very perfect antidote to the poison, prevents swelling and speedily relieves the pain. No treatment for the bite of the rattlesnake could be better than the Indian practice of sucking the wound; and this involves no danger to the operator, for the venom is innocuous when taken into the stomach. The Indians probably acted wisely in omitting to use internal remedies, for it is not likely that the poison can be neutralized by antidotes administered through the digestive system. Brainard demonstrated the antidotal powers of iodine when mixed with the venom of serpents, but he injected the antidote, with a hypodermic syringe, among the tissues where the poison had been received. The local effects of the poison of the prairie rattlesnake, or massasauga, seem to me to be in excess of the constitutional ones. I have seen a bite on the finger cause great swelling to the entire arm, attended with a discoloration that suggested gangrene, and yet it did not produce sufficient constitutional effects to cause apprehension. In one case, I gave great relief to a patient by a free incision into the parts where the poison was received, though two hours had elapsed after the injury before I saw the case. The bite was on the foot, and a

bandage had been placed tightly around the limb just below the knee immediately after it was received. The patient suffered great pain in the extremity, but this was immediately relieved by the out-flowing blood, and little constitutional disturbance followed. In the early settlement of the prairies of Illinois, to be bitten by a massasauga was not an uncommon accident, but I never knew such a case to terminate fatally. Methods of treatment that have been approved by the experience of unlettered people, should ot be held as entirely beneath the notice of the profession, for in their blind experiments they may sometimes hit on what is valuable for the relief of the sick.

E. INGALS, M.D.

34 Throop St. CHICAGO.

MEDICAL EDUCATION AND MEDICAL DEGREES IN ENGLAND.

MR. EDITOR:

I thought it might be interesting to many of your readers to learn something about English medical qualifications. I have met quite a number of medical gentlemen and students in this country who were under the impression that every medical man there was an M.D., and when told that only about five per cent. possessed that degree, were greatly surprised. The qualifications granted there are of two kinds, viz.: degrees and diplomas; the former is only conferred by a university, while the latter is conferred by an examining board called a college. No medical school in Great Britain can give any degree or diploma. The examinations for a degree and diploma are about the same, the former requiring a higher standard and a higher literary qnalification; some universities demanding a literary degree or a corresponding examination, while the colleges are satisfied with a literary qualification corresponding to the matriculation examination of the good literary colleges in this country. The literary requirements must be passed before the commencement of medical study. Then the student is registered by the General Medical Council, and no one can go up for his final examination for a degree or a diploma unless four years have elapsed since he was registered.

The degrees granted are M.B.B.S. (Bachelor of Medicine and Bachelor of Surgery); M.D.M.S. (Doctor of Medicine and Master in Surgery). The Scottish universities give the M.S. or M.CH. later (Chirurgia), with the M.B. It takes from one to five years in the different universities before an M.B. can go up for the M. D.

The diplomas are granted by the different examining boards or colleges. These are divided into surgical and medical, viz: The Royal College of Surgeons of England (London); ditto Edinburgh; ditto Dublin, and Faculty of Physicians and Surgeons, of Glasgow. These colleges give the title of Licentiate, with the exception of London, which is a Member. They also give the title of Fellow by a further examination, in London and Dublin (which is a very severe examination), and by election in Edinburgh and Glasgow.

The colleges of physicians are the Royal College of Physicians of London; ditto Edinburgh; the King and Queen's College of Physicians, Ireland (Dublin); the Apothecaries Society, or Hall, of London and Dublin. All these colleges give the title of Licentiate, and by a further examination the title of Member, and further still, Fellow, which is a very high and honorable distinction. The two Apothecaries Halls give only the title of Licentiate, which gives the same privileges as the Licentiate of the other colleges (medical).

Some years ago the favorite qualifications used to be M.R.C.S. England and L.S.A. or L.A.H.

A man before he is fully qualified must have a surgical and medical degree or diploma.

One may study in any medical school in Great Britain or at any recognized foreign medical school, and go up for examination before any of the colleges mentioned.

The degrees granted by the University of London are considered the highest (this is only an examining istitution); it is undoubtedly the hardest medical examination in the world. *Mr. Editor*, I cannot see why every medical man in this country should be an M.D. any more than every lawyer or minister an LL.D. or D.D. The M.D. degrees take precedence of all other degrees in England.

I might mention also that there is another degree-dispenser in England (Buchanan style), viz.: His Grace the Archbishop of Canterbury; he can give any degree he likes to whom he pleases, and in the English Medical Register is to be seen quite a number of M.D.'s Lambeth; they are all granted by his Lordship, without any examination. In your first number I find a resolution passed by the Chicago Medical Society recommending a State Board of Examiners, before whom every candidate for registration in Illinois has to appear, whether a graduate or not, and their work deserves high commendation. I would respectfully recommend the Ontario Medical Regulations and Laws as a model worthy of imitation. Success to the National Medical Journal.

A STUDENT.

[Just as the JOURNAL goes to press we have received the following interesting translation of M. Pasteur's letter, from a friend.—ED.]

The French government has authorized Prof. Pasteur to organize a commission to investigate the causes, character, and treatment of cholera in Egypt, and has made an appropriation of 50,000 francs for that purpose.

The French Commission left Paris August 8, and arrived in Alexandria on the 16th. The members of the French mission are: The chairman, *Dr. Strauss*, physician to the hospitals of Paris, general secretary of the Biological Society; *M. Roux*, *M. Thuillier*, and *Nocard*, professor of the veterinary school of Alfort.

The "*Temps*" publishes the following

LETTER OF MONSIEUR PASTEUR,

in reply to the many inquiries addressed to him in regard to the instructions he has given to the *French Commission on Cholera in Egypt:*

"I have indicated to the members of the French

mission on cholera the precautions they have to take against the causes of contagion. These measures are instituted on the probable, though not certain hypothesis, that cholera does not enter the human organism through the respiratory track, but solely through the digestive organs, unless it be under some very exceptional circumstances:

"1. Do not make use of *potable* water in any locality where the mission make their investigation, without having previously boiled it, and then well agitated it on cooling for two or three minutes, in a bottle half filled and well corked.

"The water of any locality may be used, provided it be obtained from the source in '*flambés*' vessels, that is to say, in vessels which have been kept for several minutes in an air heated to 150 degrees or more. The natural mineral waters can be used to advantage.

"2. Make use of wine which has been heated in bottles at 50 or 60 degrees, and drank out of '*flambés*' glasses.

"3. Make use only of well cooked aliments, or of native fruit after having been laved with boiled water, which had been kept in the vessels in which it was boiled, or in other well '*flambés*' vessels.

4. The bread cut in three slices, which slices have to be subjected to a heat of 150 degrees for about twenty minutes.

5. All table and kitchen utensils have to be subjected to a temperature of 150 degrees or more.

6. Table, bed, and toilet linen must be plunged in boiling water and then dried.

7. Water used for scullery or anywhere about the house should have been boiled and after cooling $^1/_{500}$ of thymic acid (one liter alcoholized water to two grammes of acid), or $^1/_{50}$ (one liter in twenty grammes) of phenic acid added.

8. Wash hands and face several times a day with boiled water, with the addition of a little thymic or phenic acid.

9. When cadavers, or linens soiled with choleric dejections are to be handled, use a small mask over the mouth and nostrils, made of two fine metal wire disks, between which place one centimeter thickness of cotton wadding, previously subjected to a heat of 150 degrees; the heating to be renewed at every new contact with infected material. PASTEUR.

REVIEWS.

THE PREVENTION OF INSANITY.—By NATHAN ALLEN, M.D., of Lowell, Mass. Boston: Wright and Potter Printing Co. 1883.

This is a neatly-printed pamphlet of twenty-three pages, written by one of the most earnest and intelligent cultivators of sanitary science and vital statistics in our country. As the author justly states, very much has hitherto been done to ameliorate the condition of the insane, and cure such cases as might be curable, but little or no organized measures have been taken to *prevent* or limit the prevalence of insanity in its various forms. Yet he claims that it is to a large extent a preventable disease. In proof of this, he first makes the following quotations from the late Sir James Coxe:

"Insanity is a disease of ignorance,—ignorance of the human organism, and the laws that regulate it; and the only way to check its growth is by a general diffusion of a knowledge of these laws, and the use of all those means necessary for the preservation of good health. Insanity originates in some form of disease, in a deterioration of the body rather than in an exclusive affection of the nervous system. The six leading factors are dissipation in various forms, overwork, meager fare, lack of ventilation and neglect of moral culture."

In reference to the causes stated in this quotation our author comments as follows:

"Says Sir James, the leading factors are 'dissipation in its various forms, overwork, meager fare, lack of ventilation, and neglect of moral culture.' It will be seen that each one of these covers a great deal of ground. . Passing by the last point—neglect of moral culture—the other four constitute the chief sources of disease of all kinds, some of which terminate in mental derangement. But nearly all these great agencies, productive of so much disease of body and mind, are subject to human control, and can be more or less checked, if not entirely prevented.

"The first named, dissipation, is a fruitful source of insanity. This may consist in drinking habits, in the use of tobacco and opiates, or in the abuse of the sexual organs, by licentiousness and solitary vice. These evils are all the results of voluntary acts, the work of a free agent; and so they can be prevented.

"Overwork of body or mind not infrequently brings on mental derangement.

"Meager fare and bad air are evils which multitudes of poor people cannot always escape. Neglect of moral culture is an evil directly connected with the choice of individuals, and the state of public morals. It is a sin or an evil which can be corrected, wherever the fault may be, and there certainly can be no necessity or justification for any neglect."

If, as here stated by both Sir James Coxe and Dr. Allen, "dissipation is a fruitful source of insanity," and a removal of the cause is equivalent to prevention of the disease, then certainly it must be admitted that our country has been for many years full of organizations composed of earnest and intelligent men and women working faithfully for the suppression of dissipation from the use of alcoholic drinks, opiates and tobacco; and, of course, indirectly for the prevention of insanity and all other evil consequences resulting from such dissipation. "Neglect of moral culture" is alleged as another important cause of insanity. But as every temperance society is an organization for the express purpose of suppressing "dissipation," so is every well regulated school and every religious society an organization working constantly for the promotion of moral culture and the diffusion of knowledge.

If it be true, therefore, that we have no organizations, either voluntary or legal, having for their avowed object the *prevention* of insanity, we have many and efficient ones engaged directly in the work of removing some of the most prolific causes of mental disease. All this, however, does not prove

that the pamphlet under consideration has not appeared in good time and is calculated to do much good. On the contrary, it is timely in its appearance and full of important facts and suggestions; as the following quotations, which constitute the closing paragraphs, and relate to the "Duty of Legislative Bodies," will show:

"Almost any amount of money has been expended in building and managing lunatic hospitals, but nothing to prevent insanity. If one-tenth, or even one-hundredth of the means now so lavishly bestowed upon this unfortunate class in large institutions were expended in different ways to *prevent insanity*, in cutting off its supplies, what a difference it might make in diminishing the number of the insane and reducing the amount of suffering! How long will it take the public, and legislative bodies particularly, to learn the truth of the proverb, 'An ounce of prevention is worth a pound of cure!'

"If, by a general diffusion of a knowledge of hygiene, and the application of sanitary laws, one-quarter or more of the sickness and premature mortality can be prevented, certainly some small portion of the existing insanity should be prevented by similar means; especially as preventing diseases and improving the general health of the people must aid in checking the first approaches of insanity.

"It surely should be the settled policy of all legislative bodies and the executive officers of every State to carry on systematic measures for the prevention of insanity; and, unless such provision is made by legislative action, the work will never be done. The number of the insane and of lunatic hospitals, together with the burdens of their expense, will increase more and more.

"Let *prevention*, then, receive some attention. The claims of humanity and economy demand it.

"But no movement of this kind will be made unless encouraged by legislative action. Public bodies, when called upon to make large expenditures year after year, often resort to the the wise expedient of providing what is called a "sinking fund," to aid in liquidating the debt. If some systematic and efficient measures could be employed to prevent persons from becoming insane, even if the number were small, what better sinking fund could be devised?

"It is fifty years since the first State hospital was opened for the insane, yet probably at no period were this unfortunate class increasing faster than at the present time. This is especially true of the chronic and pauper class. If they fail to receive proper treatment in private practice, and the hospitals cure only about one-half, the balance is added every year to the public dependents. How long can such a state of things continue? And, unless reform or improvement comes from some quarter, what and where is the end to be?

"Some one may inquire, What can we do? When such inquiries are made in earnest, and by the proper authorities, the work will have commenced. Ways and means will soon be devised. Questions frequently constitute the first step in reform.

"For how long are we to continue building great institutions, and making large appropriations every year for carrying them on? At the same time, insanity is constantly increasing, making the burdens of taxation every year heavier and heavier. It may well become us to adopt the confession (already quoted) made before the lunacy committee of Parliament: 'The fact is, we have allowed a terrible evil to grow up among us, and we have been content to lop its branches, leaving the growth as luxuriant as ever, instead of directing our efforts to destroy it at the roots.'"

MALARIAL POISONING THE CAUSE OF HÆMATURIA. With an Appendix. By W. O'DANIEL, A.M., M.D., Bullards, Georgia.

This is a pamphlet of fourteen pages, reprinted from the Transactions of the Medical Association of Georgia, 1882.

The writer adduces satisfactory proof of the connection between the action of concentrated malarial poison and a dangerous form of hæmaturia. He relates some instructive cases with their treatment, and closes his paper with the following question and answer:

"Why has the malignancy of malarial fevers so increased, *especially* in the cotton-growing States, since the war? One of the most potent and rational causes, to our mind, is on account of the failure on the part of agriculturists generally to *properly* drain their bottom, branch and creek lands, as they did before the war, thereby preventing vegetable decomposition during the summer and autumn months, which is sure to produce miasmatic fevers.

"Such lands were then appreciated and kept in a high state of cultivation, and the annual return from the crops *abundantly* repaid for the trouble; whereas now, the scarcity of and a want of reliable labor for the accomplishment of such work, renders drainage impossible in many instances; hence the cause of the poisonous influences. Therefore, those who persist in residing in close proximity to soils which are allowed to remain in a condition which is favorable to the production of these foul emanations, malaria, miasma, spores, cryptogams, germs, bacteria, bacillus malariæ, or whatever they *may* be called, *may expect with great certainty* annual visitations of malarial fevers *caused* by these toxic influences."

ANATOMY, DESCRIPTIVE AND SURGICAL, by HENRY GRAY, F.R.S.; with an Introduction on General Anatomy and Development, by T. Holmes. Edited by T. P. PICK. A new American from tenth English edition; with Landmarks, Medical and Surgical, by L. Holden. H. C. Lea's Sons & Co., Philadelphia.

There is probably no work used so universally by physicians and medical students as this one. It is deserving of the confidence that they repose in it. If the present edition is compared with that issued ten years ago, one will readily see how much it has been improved in that time. Many pages have been added to the text, especially in those parts that treat of histology; and many new cuts have been introduced, and old ones modified. In the matter of

illustration there is much room still for improvement. Many of the old cuts, illustrations of minute anatomy, are too much diagrammatic, and not sufficiently realistic. Another criticism upon them, also, is the failure to say just how much the specimens were magnified. Much improvement has also been made in the illustrations of the relations of the visceral organs, but there is also room for further improvement here. For example, the old cut of the pelvic organs is retained, showing the vagina and rectum unnaturally dilated. The present edition is well printed on good paper, and is well bound. The work is so thoroughly well known that an extended notice here is unnecessary.

SANITARY AND STATISTICAL REPORT OF THE SURGEON-GENERAL OF THE NAVY FOR THE YEAR 1881. Washington, Government Printing-Office. 1883.

This, the annual report of Surgeon-General Wales, is a bulky octavo of 684 pages. In his introductory remarks, he calls attention to the fact that a laboratory has been established for original work, and that a museum and library have been founded. The library already contains nearly four thousand volumes. The want of proper appropriations for the hospitals and other branches of the service is justly deplored; in several instances about one-half the amount required being appropriated. The valuable services rendered by the hospital branch are well shown in the summing up by figures—giving 14,013 cases as the total number treated during the year. An interesting table is given referring to the examination of recruits, of whom 8,807 presented themselves, and of these 2,750 were rejected, or 31 per cent. The causes of rejection are tabulated, and the largest number, 661, is from defective development; next to this come diseases of the eye, 590. Syphilis we find put down at 115; diseases of the digestive system 456, and diseases of the circulatory system, 364, make up of course a large proportion; while diseases of the respiratory system are put very low, 85. A series of interesting tables are given, which form valuable additions to the statistics of diseases, their causes, and the influence of age upon them. The work of Dr. T. H. Streets in studying the different organisms of air dust is given at some length, with interesting photo-micrographic delineations of bacteria, and in connection with it, the work of a board of survey for sanitary purposes on the proposed (now accepted) site for a new Naval Observatory, shows how thorough the facilities for examining into air, drainage materials and the soil have become. The analyses were done by Drs. Griffith and Kidder. The reports on the sanitary conditions of our squadrons, and of the naval hospitals, form the bulk of the report, and some interesting details of cases are given, but there is no table of contents, the cases as printed are not given a sufficiently individual character by distinct topography, and the index is very imperfect. Dr. J. M. Flint closes the volume with a report on the pharmacopœias, valuable in its details and criticisms.

W. L.

MISCELLANEOUS.

T. H. HUXLEY and J. Tomes have been recently elected Honorary Fellows of the Royal College of Surgeons.

THE fourteenth annual meeting of the Virginia State Medical Society will be held at Roxbridge Alum Springs, September 4 to 6.

THE King of Prussia has given permission to Dr. Koch to wear the Commanders' Cross of the Royal Spanish Catholic Order of Isabella.

THE Duval Prize has been awarded to Dr. Desuos by the Paris Society of Surgery, for an essay on "Lithotrity in Prolonged Sittings."

DR. H. J. BIGELOW, of Boston, Prof. Charcot, of Paris, Prof. Du Bois Reymond, of Berlin, and M. L. Pasteur, of Paris, have been elected Foreign Honorary Fellows of the Royal Medical and Chirurgical Society of London.

THE Garfield Hospital Board, of Washington, has bought a double brick house and seven acres of land for $38,000, and has money in bank to pay for a wing costing $15,000, which it is proposed to add to the present building. It is expected that the hospital will soon be opened for patients. There is no truth in the story that the hospital project has been abandoned, and that the money given for that purpose will be turned over to the monument committee.

DR. H. NEWELL MARTIN, professor of biology in John Hopkins' University, is Croonian lecturer of the Royal Society of London for the current year. The Croonian lecture was founded by Lady Sadlier, in fulfillment of a plan of her former husband, Dr. Croone, one of the founders and the first registrar of the Royal Society. By her will, made in 1701, she devised one-fifth of the clear rent of the King's Head Tavern, in or near Old Fish street, London, at the corner of Lambeth Hill, to be vested in the Royal Society, for the support of a lecture and illustrative experiment on local motion. For many years past there has been no formal deliverance of the lecture. The council of the Royal Society select from the papers presented to them during the preceding twelve months that one dealing with animal motion which they think most noteworthy, and publish it as the Croonian lecture, sending to the author the sum derived from Lady Sadlier's bequest. The amount of money is trivial, but the appointment as Croonian lecturer is a highly-prized distinction. The paper by Professor Martin, which is to be printed as the Croonian lecture for 1883, is on the 'Effect of Changes of Temperature on the Beat of the Heart.' It is interesting to note that the first Croonian lecture delivered by Dr. Stuart in 1738 was on the 'Motion of the Heart.'—*Bost. Med. and Surg. Journal.*

NECROLOGICAL.

WILLARD, MOSES THOMPSON, M.D., of Concord, N. H., was born in Bow, N. H., June 21, 1806; died at his residence in Center street, Concord, May 31, 1883. He was the son of Moses F. Willard. He was educated at the Pembroke Academy, and took his medical degree from the Medical College at Hanover in 1835. Soon after graduating he began the practice of dentistry in Concord, and was extensively patronized. I am not informed that he ever engaged in the practice of medicine. His name appears as a delegate from the Center District Medical Society, of New Hampshire, to the American Medical Association, in 1849. He was public spirited and popular as a citizen. He served as Alderman in 1857–8, and Mayor of the city in 1859–60, and Postmaster under Johnson and Grant. He was an ardent Son of Temperance, and long identified with the interests of public education. Dr. Willard was twice married, first to Mary B. Morgan, of Pembroke; after her death, to Zelda Morgan, of the same place, who died about two years before the Doctor. He left no children. J. M. T.

WILBUR, HARVEY BACHUS, M.D., of Syracuse, N. Y., was born at Wendell, Mass., August 18, 1820, and died suddenly at the State Idiot Asylum in Syracuse, May 1, 1883. He was the son of the Rev. Harvey Wilbur, of Massachusetts. He was first in study, and graduated at Amherst College in 1838; taught school for a short time, and studied engineering, and then medicine, and practiced for a time at Lowell, and then at Barre, Mass. Became interested in the welfare and education of idiots, and in 1848 received several into his own house to educate. In 1851 he induced the Legislature of New York to establish an experimental school at Albany, which proved so satisfactory as to lead to a permanent and fully organized institution for idiots at Syracuse in 1854, which is known as the State Asylum for Idiots. Dr. Wilbur continued its efficient superintendent until his death. He published various reports and papers on idiocy, which show his thorough familiarity with his subject. In 1860 he attended the American Medical Association as a delegate from the New York State Medical Society. J. M. T.

HOLMES, CHRISTOPHER COLUMBUS, M.D., of Milton, Mass.; was born in Kingston, Mass., Sept. 14, 1817, died at his residence in Milton, July 16, 1882. His academic education was obtained at Harvard College, where he graduated in 1837. His medical degree was received from the same university. He then served for a year as junior physician in the Massachusetts General Hospital, after which he settled to practice in Milton, where he was actively engaged in the duties of his profession until the time of his death. His field of practice was a laborious one, often calling upon him to visit patients in Dorchester, Quincy, Canton, and other remote towns. Although devoted to his profession, and conscientious in the discharge of its obligations, he found time to interest himself in all public matters which benefited the people. During the civil war he was commander of the cadets, a local military organization. He was a man of refined tastes and eminent social qualities, and his presence in the social circle and the sick room always brought sunshine. He will long be remembered by his townsmen and by his professional brethren as a steadfast friend and wise counsellor, and a Christian gentleman. He was a member of the Massachusetts Medical Society, and since 1853 of the American Medical Association. He leaves a wife and three children. J. M. T.

From data furnished by Dr. H. O. Marcy.

HAUXHURST, D. C., M.D., of Battle Creek, Michigan, died of small-pox in Paris, France, Feb. 16, 1882. Dr. Hauxhurst was born in Oxford, Oakland county, Michigan, and was 39 years of age at the time of his death. He early developed a love for scientific study. After spending some years in Bedford Seminary he gave up two years to the special study of geology and became quite proficient in this science. He then spent one year at the Michigan State Agricultural College in the practical study of chemistry. Subsequently, having practiced dentistry for several years, he entered the Michigan State University, continuing attendance, with some interruptions, for five years, until 1877, graduating first in the dental department in 1876, and in the medical department in 1877. In 1878 he became a member of the State Medical Society. In 1881 he married a daughter of Hon. T. B. Skinner, of Battle Creek, and the happy pair went to Paris on their bridal tour, where the doctor was pursuing his studies when he fell a victim, as many of his friends think, to his non belief in the value and efficiency of vaccination in preventing small-pox. It is stated that he had not been vaccinated. Dr. Hauxhurst held that dentistry should be considered a specialty in a medical education, and that every dentist should be thoroughly versed in medical science. By his death scientific medicine has lost one of its most enthusiastic workers, and this Association an honored member. He was an earnest, persistent student, a quiet, modest gentleman, a faithful friend, a true physician, and an honest man. The Calhoun County Medical Society, on hearing of the doctor's death, convened and passed a series of resolutions, expressive of the highest esteem of his professional worth, and of sympathy with his family.

[Sketch forwarded by DR. W. F. BREAKEY, of Michigan.]

FARRAND, DAVID OSBURN, M.D., was born in Ann Arbor, April 23, 1837, and was of Hugenot descent. He was the youngest of four children born to Bethuel and Deborah Farrand.

After only a few days of illness, during which his friends entertained no serious fears for his safety until his last hours, Dr. D. O. Farrand died at 5 o'clock Sunday morning, March 19, 1883.

His father founded the first water works in Detroit, and after removing to Ann Arbor became the first judge of probate of Washtenaw county.

Dr. Farrand received his education in the common and private schools, and subsequently entered the university, where he pursued a literary course. From there he went to Munich, Bavaria, to complete his studies. He remained in Munich one year, and, returning in 1858, entered the wholesale drug-house of his brother, Jacob S. Farrand. He remained there two years, having in the meantime decided to become a physician. In order to pursue his studies he entered the New York College of Physicians and Surgeons. Graduating in 1862 he entered the regular army as assistant surgeon, and made his headquarters at St. Louis, Mo. In 1865 he resigned his position. The year previous he attended the late Gen. Lewis Cass, and remained with him until his death, which event took place in the room afterward occupied by Dr. Farrand for private consultations, at his office adjoining his residence on Fort street. In 1866 Dr. Farrand was taken into partnership with the late Dr. Zina Pitcher, which continued until Dr. Pitcher's death in 1871. September 11, 1866, he was united in marriage to Miss Elizabeth Lewis Twombley, of Niles, Mich., daughter of Royal T. Twombley, of that city, and now of Fort Worth, Tex. Mrs. Farrand and three children, Royal T., aged 15; May, aged 13, and Elizabeth T., aged 12 years, are now living. He has three brothers, J. B. and B. C., of Port Huron, and Jacob S., of Detroit.

Dr. Farrand was a member of the American Medical Association, of the Michigan State Medical Association, and the Detroit Medical and Library Association. He was for six years a member of the Detroit School Board. At the time of his death, and for many years previous, he was surgeon to the Harper Hospital and of the Metropolitan police, surgeon-in-chief of the Michigan Central Railroad, chief medical examiner of the Michigan Mutual Life Insurance Company, and one of its directors.

In all that pertained to the interests of the community he was active. In political affairs he was a Republican, as earnest as he was well informed, and he used to say that he found his only recreation in politics. His endeavor was for the public good. He made earnest efforts for the advancement of the cause of popular education in this city, and was an effective advocate of the recent change in the method of selecting the members of the Board of Education. He was instrumental in securing the establishment of the temporary Board of Health during the small-pox season of 1881, and during the continuance of that Board he took the greatest interest in it. It was through his instrumentality, chiefly, that the present permanent Board of Health was organized. He was the author of the bill creating it, and was the first member of the Board appointed. He was unanimously chosen its first president. He attended all the meetings of the Board, and took an intense interest in the work performed by it. He was ever willing to take upon himself labor when he thought hr could thereby serve the interests of the public or of any friend. He was always in earnest and he was always cheerful. One never met a more pleasant, affable, courteous, and perfect gentleman than Dr. Farrand.

After the death of Dr. Pitcher, Dr. Farrand formed a co-partnership with Dr. George B. Foster, which lasted until the latter's death in 1881. In a business which aggregated more than $20,000 per year, there never was a stroke of the pen between the two partners.

The sad prediction of many friends that Dr. Farrand would die of over-work, seems to have come only too true. It is but a few months since he recovered from a protracted and serious illness, the result of doing too much, and the exciting cause of his fatal malady was over-exertion. In spite of his exacting duties he never pleaded lack of time when asked to do a favor, and his immense work was so systematized that only his immediate acquaintances knew the extent of it. He died in his prime, having literally given his noble life to his friends, who will now so deeply mourn his untimely departure, and long hold him in loving remembrance.

The Board of Health and the Medical Library Association as well as the Medical Society convened in special session, and each passed appropriate resolutions of respect for his memory and of condolence with his family.

Forwarded by Dr. W. Bracky.

Fussell, Edwin, M.D., was born in Chester county, Pennsylvania, June 14, 1813. His boyhood was passed in working on his father's farm, and his education was obtained chiefly by study at home. At the age of twenty he began the study of medicine in the University of Pennsylvania, and graduated in 1835. After practicing one year in his native place, he removed to Indiana, where he remained seven years. From there, after six years more of residence in Chester county, Pennsylvania, he went to Philadelphia, where he remained until 1868. In 1853 he he was elected to the professorship of anatomy and histology in the Woman's Medical College of Pennsylvania, which position he filled very ably until 1857, when he was transferred to the chair of obstetrics and the diseases of women and children. This was a position more congenial to his tastes and more in accord with his attainments; for his gentle and sympathetic disposition had inclined him to that special department of practice, and in it he had achieved a well-merited reputation. In 1865 he accepted a transfer to the chair of principles and practice of medicine, which he continued to fill until 1868, when failing health compelled his retirement, for a few years from his profession to a farm on the sea-shore, near Cape May.

When Dr. Fussel accepted a professorship in the Woman's Medical College he did so at the risk of forfeiting the fellowship of his medical brethren, for the cause represented by that college was intensely unpopular among conservative people, and especially so to physicians, who could not overcome at once a feeling of professional jealousy toward women as physicians. But he was accustomed to encounter public disapproval in his resolute advocacy of temperance and abolition. Indeed, he inherited the mental temperament that impelled him to do whatever he believed might be of public benefit, though

at the cost of personal disadvantage. It was his father's brother, Dr. Bartholomew Fussell, of Hamorton, Chester county, who first conceived the idea of the Woman's Medical College; and he, too, was an ardent advocate of temperance and the abolition of slavery.

In 1849 he invited Drs. Edwin Fussell, Franklin Taylor, Ezra Michener, of New Garden, Chester county, and the writer of this memoir, to confer with him on the subject at his home in Hamorton.

In 1871, Dr. Fussell removed to Media, Delaware county, and resumed the practice of medicine. He was a member of the Philadelphia Academy of Natural Sciences, of the Delaware County Institute of Science, of the Delaware County Medical Society, of the Medical Society of the State of Pennsylvania, and of the American Medical Association, in 1876. He attended but one meeting. As a member of our county society, he was a faithful attendant, a prudent counselor, and always a cheerful presence to the younger members.

In his domestic and social relations he was amply repaid for all he suffered as a philanthropist. In his family he was the affectionate husband of a loving wife, and the revered father of dutiful children. In society, he had always many warm friends among people of cultivated intellects and refined tastes. No one who was capable of appreciating him could fail to respect him. Yet when those are all told—the record of a life busy in doing good—the best can never be told. The "little, nameless, unremembered acts of kindness and of love;" the kindly smile; the gentle word; the cheery joke; these were the daily habit of his life, and are sunk deep in the hearts of those who knew him.

ELWOOD HARVEY, M.D.

COX, EDWARD, M.D., of Battle Creek, Mich., was born in Cambridge, Washington county, N. Y., died at his residence in Battle Creek, Mich., September 19, 1882. He was the son of Silas and Abigail Cox. Having acquired a good ordinary education he studied medicine partly with Dr. Benjamin Trumbull, of Boradina, and Dr. C. Campbell, of South Butler, N. Y. He attended lectures at Geneva Medical College, New York, where he graduated M.D, in 1839. He began practice in Wayne county, N. Y., but in September of 1839, removed to Battle Creek, Mich., then a small village.

A notice of the character and life of Dr. Cox is published in the columns of the Detroit *Lancet*, and also in the Battle Creek *Journal*, and is a deserved tribute to the memory of a good man:

"Another of the pioneer physicians of Michigan has gone. For more than forty years Dr. Cox has lived and labored in Battle Creek. He was an excellent doctor, but he was far more than a doctor. He was a man among men, acting, thinking and speaking in reference to all questions of importance, to the wellfare of the city, his State, and his country. While a politician, in the best sense of that term, he was more. He was even a patriot. When the war with the South broke out, although a Democrat, he at once suggested, and succeeded in realizing the suggestion, that the flag poles of the separate parties should be placed together as an emblem to those who should see it that in support of the country the mass of the members of both parties in Battle Creek were ONE. Until July 1 Dr. Cox continued to meet all the calls of an extensive general practice. Attacked first with pneumonia, he finally succumbed on September 19, 1882. At his funeral on the 21st were gathered representatives of the medical profession from all parts of the State of Michigan, as well as from his town and surrounding counties. Nor was the attendance of these gentlemen a mere formal service, as their speeches at the memorial services will abundantly testify. It is very unusual, to say the least, that so many friends in all professions and walks of life for many years testify so uniformly to the value to them and to the world of a strong, manly heart and head in a member of the medical profession."

A memorial notice of the life and character of Dr. Cox was read by Dr. Jerome at meeting of Board of Counselors for Detroit Medical College and remarks made by members of that body, expressing the high estimate in which he was held by his professional brethren and friends. The Committee on Necrology of the State Medical Society report to that society an appreciative biographical sketch with resolutions of respect for his worth and sympathy for his family, which will be published in transactions of society for 1883.

W. F. B.

DOUGHERTY, ALEXANDER N., M.D., of Newark, N. J., was born in that city in 1820, died suddenly of disease of the heart Nov. 29th, 1882. He was the son of Alexander Dougherty, a wealthy leather manufacturer of Newark. The subject of this sketch was a graduate of Oberlin College, Ohio. He then began the study of medicine and after attending the usual courses of lectures, received the degree of M.D. from the College of Physicians and Surgeons in New York. In 1845 he began practice in the homestead, and soon acquired a large and lucrative business. When the war between the States broke out he entered the military service as surgeon of the 4th N. J. regiment with rank of major. He was with the regiment at Fair Oaks, Malvern Hill and all through the campaign of "on to Richmond," and later at Antietam and Chancellorville was at his post of duty. Soon after entering the service he was made brigade surgeon of Kearney's N. J. Brigade, and then director of the second army corps. When General Hancock was wounded at Gettysburgh Dr. Dougherty was immediately by his side and dressed his wound. Dr. Dougherty was brevetted Oct. 12th, 1865, colonel for meritorious services.

After the war Dr. Dougherty resumed his practice. When the New Jersey Home for Disabled Soldiers was organized he was appointed commander and surgeon, and held the position to the time of his death. In 1867 he was appointed postmaster, and held the position until 1869, when he was removed by President Grant. He served in the various offices of the State Medical Society, including that of president and contributed a number of papers to the transactions. He was on the staff of St. Michael's and also on the Barnabas Hospital. He leaves a wife and four sons.

J. M. T.

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ORIGINAL ARTICLES.

A CASE ILLUSTRATING THE SEGMENTAL FEATURE OF GLAUCOMA.

BY H. CULBERTSON, M.D., ASSISTANT SURGEON U. S. ARMY, RETIRED.

[Presented to the Section on Ophthalmology, Otology and Laryngology.]

On the 30th of November, 1878, I was called to see Miss M. M., aged 41 years.

She had been suffering with extreme pain in her eyes for four weeks. The disease began in the left, and one week later in the right eye. The vision failed during a night in each eye, and from the periphery of the visual field, until at its center, in the right eye, she could only discern the light of a candle, and in the left distinguish the outlines of a candle light.

The pain was of the most acute character, aggravated at night, deep-seated in the orbit, and radiated over the brow and in the nasal region. The general system was much depressed—enfeebled—from the suffering endured.

The history showed excessive use of eyes on fine work, and exposure to cold while riding in a carriage, the ill effects of which were increased by wet or damp feet.

Malaria was excluded as a cause.

Tension in each eye = +1. Conjunctival injection was marked. The corneæ were not clouded, for the pupils could be seen dilated, and their margins slightly pigmented and irregular.

The vitreous was clouded, but there were no floculi. The anterior chambers were smaller than normal, and the lens of each eye advanced. There was pigment (limited) upon the anterior lens capsule. The fundus of either eye could be made out with difficulty. The papillæ were, however, clouded, and margins obscured, at points, as well as their vessels. Their arteries were smaller, and veins slightly larger than normal, and these curved over the disc-margins and were lost and appeared again on the papillæ at points.

The cupping of the discs was not marked. There was no pulsation of the arteria centralis.

We decided the pathology of this case to be choroido-retinitis, and the diagnosis acute glaucoma. The prognosis was unfavorable from the very acute character of the disease, and its long duration—four weeks. The treatment advised was iridectomy, and temporarily opium and biniodide of mercury was given until she could be brought to this place.

On the 2d day of December following, after chloro-etherizing (adding a few drops of amyl nitrite), I did an upper iridectomy upon each eye simultaneously, secured conjunctival flaps, and removed about one-fifth of each iris. The latter was so dilated as not to fall into the incisions, but with forceps it was well drawn out, especially at the angles of the corneal wound, and excised as close to the cornea as possible. Some blood was removed from the anterior chambers by stroking the corneæ.

The incisions adapted nicely, and there was no enclavement of the iris. Subsequently each cornea and iris healed rapidly and perfectly. Reaction was favorable from anæsthesia and operation. Within three hours after the operation, two hypodermatics of morphine in the temples, each gr. 1/6, was given to control the pain, which was relieved. On December 3 a mixture of croton and hydrate of chloral and morphine was employed, which relieved the pain and procured sleep. On the 5th of December she suffered no pain, the eyes looked well and clear, and the corneal wounds were united, and the conjuctival incisions cicatrizing.

From this date the improvement was uniform. She was given at intervals iron, quinia, strychnia and fl. ex. jaborandi, and, locally, eserine, as well as the bichloride and the biniodide of mercury.

February 16, 1879, the patient was discharged to return to her home. Then VR = qualitative perception of light only; and VL = ,33 with the aid of a +3Ds glass. The pupils were largely dilated, but regular. The media were not perfectly clear.

The margins of the right disc were uniform, but obscured and unpigmented.

The disc looked slightly white and lacked blood, and there was atrophic cupping of this papilla. The retinal arteries and veins were abnormally small, and no atrophy or pigmentation of the retina was detectable.

In the left eye there was cupping of the disc of the glaucomatous form. Still the vessels could be seen throughout their course on the papilla. The arteries on the disc were normal in size, but the veins slightly large. The color of the papilla was good, and its margins were irregular and pigmented at points. The media of this eye were clear.

On the fifth of July, 1879, with + D.3. spheric VL = 20. The discs were more marked in their outlines, and retinal arteries larger in the left eye, which latter is improving generally.

On the third of October following VR = counting fingers and seeing large objects indistinctly with or without glasses. At the same date — VL., unaided, = 13 and with + D3, spheric V = 50. The range of vision in this eye was 22 to 50 cm. The field of vision L. E. is reduced at the periphery, but least impaired in the upper region of the field, and is more limited in the nasal or temporal regions. The pupils are largely dilated and the media are clear in each eye. The right disc is blue white, with shallow pathological cupping in its area generally; but there is a slight glaucomatous excavation at its lower margin. At its outer margin are pigment deposits. Its margins are defined, but not sharply. Its nerve vessels are very sparse, and its external vascular zone wanting. Its retinal vessels (on the disc) are distinct (excepting at the lower margin where they are curved) but slightly paler and abnormally small. The arteries of the retina are smaller than normal and somewhat veiled in its stroma. The larger vessels have the light, longitudinal streak. The stroma in and about the macula is indistinct as well as that of the retina blurred, and at several points the vessels of the choroid can be seen. The retinal vessels do not stand out boldly. The disc of the left eye at its entire margin presents the glaucomatous aspect, a white color at its central area, but the red outer annulus is seen and several optic nerve vessels. Its margins are distict and there is deposited newly formed pigment generally at its edges. The retinal arteries are lost at its margins to appear again on the expanse of the papilla, but above they can be seen curving in all that region of the disc. The retinal vessels are slightly smaller and lighter in color than normal. The stroma of the retina appears thinner at the periphery, where the choroidal vessels are seen, but the latter are not detectable at the center of the fundus. The details of the fundus are not seen with perfect distinctness, but more plainly than in the right eye. The retinal arteries are fewer in number in the region about the macula, but those delicate branches present run well up to this spot. In the center of the field the vessels are more distinct, but at the periphery fundus they are slightly veiled.

There are no posterior synechia but at one point and that is pigment deposited on the anterior capsule of the lens of the left eye. The papillary border is distinct and is regular in curvature.

June 15, 1882—On examining the eyes to-day, the right eye shows the following details: Atrophy at outside of disc; grey atrophy at the upper and outer quadrant; vessels absent on the outer half of disc, cupping of disc, marked on outer side, and most in upper and outer quadrant; arteries on inside of disc very fine and extend over on retina by several branches.

There is well marked curving of the vessels at the inner and lower parts of disc; only one small vessel, a vein, below on retina; the macula obscured by plastic deposits. The disc is white, except in the upper and outer quadrant it is gray. Can see more light with this eye than formerly. State of L. E: The macula is free from disease; the artery just above it is somewhat obscured; the vessels are incurvated on disc; veins and arteries smaller than normal, but larger than when last examined; at the lower and outer quadrant of disc, there is gray atrophy, with distinct irregular pigmented borders and steep sides, the upper and outer margins of disc pigmented and too well defined.

There is some cupping of both discs, though this is not so marked as when last seen. The pupils are still dilated. In the left eye the entire disc is white, save in the lower and outer quadrant it is gray. The entire margin of this disc is pigmented. VL = 50, with + D 3s.

Remarks.—The most profound effects of this disease in the right eye were at the upper and outer quadrant, and in the left eye in the lower and outer quadrant; the temporal regions were next most invaded in each eye, and the nasal regions were least affected. The periphery, however, of the fundus was generally involved in either eye, a well known diagnostic sign of choroidal disease, especially when the iris was affected, as in this case.

A careful survey of this case, and the appended field charts for light and the primary colors, will, we think, lead to the conclusion that the effects of disease observed in either eye denote the presence of a general as well as a "*segmental*" influence of some form.

The ultimate results in the right eye are atrophy of the retinal structures, the force of the diseased process falling upon the retina as well as upon the choroid, and extending to the centers of the fundus in those membranes and to the papilla. Retino-choroiditis is the typical lesion in this eye.

In the left eye the glancomatous element is more manifest, the inflammation here ending in atrophy of the periphery of the retina, thus limiting the field of vision, and affecting the macula and central region of the retina less, and permitting comparatively fair central vision in this eye.

In the other (right) eye the impress of the disease was greatest at the center of the field, and impaired most central and scarcely less peripheral vision.

The vision failed suddenly and during the night, and the attack began promptly after subjection to the influence of exciting causes, though it is evident that the predisposing cause—over-use of eyes—was in operation for weeks, which latter was aided in its effects by the delicate nervous and somewhat feeble organization of the patient.

There were no uterine complications in the case. Looking at the different pathological results in each eye, the more central lesions in the right, and the more peripheral in the left, another segmental feature is observed.

Again the "segmental feature" is seen in the limited points of gray atrophy shown on each disc, and, in the marked impress of the disease, in certain regions and quadrants of the eyes. The outer half of each fundus suffered most, and it is to be noticed that the great bulk of the ciliary nerves and vessels reach the fundus from this side of the eye-ball.

It does not necessarily follow that because these lesions are situated in the main track of the vessels and nerves of the eye, that the morbid process orig-

inated either within or without the eye-ball in blood-vessels or nerves, for it has been already shown that blood-vessels have an intimate relation with inflammatory processes, and of such a nature as to account for morbid processes spreading in the line of these supplies, and yet not themselves the prime factors of the disease.

The doctrine of Cohneim has been generally abandoned, and the focus of inflammation transferred to the tissues, by such authority as S. Stricker and Spina. In relation to the nerves, these authorities hold that "disease of the vaso-motor centers is certainly adapted to provoke pathological disturbances in peripheral organs, i. e., in the region of distribution of the affected nerves."[1]

It is evident, however, that the lesions must be *found* at the "*nervous centers*" in order to constitute them a *cause* of the reflected affection; and it may well be inquired, Have such been observed in the NERVE "*centers*" in cases of glaucoma?

Is it not true that the lesions in this disease have invariably been found in the eye?

While not attempting to determine the nature of glaucoma, one may be permitted to consider this important subject in reporting a case of this disease.

In looking at the varied symptoms of glaucoma, one is struck with the uniform location of lesions in the eye. Pain may or may not be present in this affection.

Authorities assert that even increased tension is not always observed in simple glaucoma.

So, too, cupping of the optic nerve is not always found in this affection. Again, the cornea may or may not be sensitive, and it is true that individual portions of this membrane may be anæsthetic, and the remainder sensitive. The external appearance of the eye may seem healthy, the media clear, the iris normal or but little congested, and the pupil be dilated scarcely at all. The course of the disease may be so insidious in one eye as to be unsuspected, if the sight of the other is perfect.

Our case presents the lesions of plastic inflammation. It is true that the earlier iridectomy is performed, the less are structural lesions observed (as a general rule in this disease), and the more perfect the cure. Why? Because it is held by not a few authorities that, in the earlier stages of acute glaucoma, the inflammation is of the serous character. In the chronic forms of the disease, however, lesions of nutrition give character to the affection, and such as was found in our case.

It would seem improbable that this affection can be traced to reflex irritation, because the local effects (reflected) are so uniformly confined to particular regions of the eye, and no constant relevant lesions are found, so far as we are aware, in the medulla oblongata or spine, or ganglionic centers, or at any point in nerve branches proceeding from these, whence such irritations have been reflected upon the eye, such as is seen in disease of the ganglia of the posterior roots of the spinal nerves in herpes.

It would seem, then, that one must look to the eye itself as the point of origin of the morbid process in glaucoma.

In our case the cupping of the discs, probably, came late, and grew more distinct afterwards and subsequent to iridectomy, a result of tissue metamorphosis.

There was, too, in our example, iritis, shown by the presence of pigment on the anterior lens-capsule, and the rigid and dilated state of the iris in each eye, as well as by the earlier irregularity in the pupillary margins. The disease seems to have spread from the periphery along the uveal track, involving the iris, and leading to atrophy of the pigment layer of the choroid at its periphery. The profound loss of vision in the right eye leads to the conclusion that the choroiditis extended to, involved and impaired the layer of rods and cones of the retina, and, finally, the lesions in and about the right disk show that the diseased process extended throughout the pigmental layer of the choroid, and involving the precipient layer of the retina, and, to some extent, the layer of nerve-fibers in certain segments of the fundus, extended also to the structures constituting the optic disk itself, and practically abolished vision in this eye.

The tension of the eyes, in this case, was not increased in a marked manner, never rising above +1 in either eye. After the iridectomy, and when the pain had subsided, it became normal and remained so; yet it will be observed, that although the tension was equal in each eye, structural lesions were much greater in the right than in the left eye, which is against the pressure theory as a cause of glaucoma.

The advancement of the lens in this case was not extreme, nor was the anterior chamber reduced greatly in size; which facts, associatéd with the presence of such metamorphic changes, as developed in the eyes of this patient, are not in favor of the pressure theory as a cause of this disease.

We may again refer to the reflex theory as a cause of glaucoma. It has been claimed that this may be true in this disease, because there is a class of paralysis due to reflex irritations, as, for instance, reflex paraplegia due to disease of the kidneys; and also that diseases of the nerve centers (previously referred to) may induce paralysis and structural lesions of distal parts, as in infantile paralysis.

This may be answered by the inquiry, has it been shown that such lesions do exist, in those afflicted with glaucoma, in the nerves or nerve centers? and, further, why is it that these glaucomic eyes so constantly receive the morbid impress it there is not a diseased entity seated in the eye itself? Why does the eye so generally react upon itself, if it is not primarily at fault in this affection? Why invoke the aid of another organ to account for the phenomena unless compelled to do so?

Can we not learn a lesson in this connection, from Stricker, in his recently developed views of the nature of inflammation? If he has so clearly shown that the prime feature of inflammation, is tissue metamorphosis—of cells, and basis substance—into the amœboid cells, and a return to the embryonic state of the parts involved; and that hyperæmic phenomena are

[1] The International Encycl. Surg., vol. 1, p. 60.

but attendants of the inflammatory process—that the caliber of the blood-vessels is simply regulated by vaso-motor influence; and if we have before us the recognized results of such tissue changes in eyes subject to glaucoma; why may we not admit that the disease is inflammatory in nature, if thus we can account for the phenomena in such cases?

Why seek to cast the failure upon obstructed outlets, when in this affection, these are not always closed? Why make pain, or its effects, a primary factor when it is not always present? Why elevate tension to a prominence above that which causes the tension?

Are we not well taught that glaucoma is but an epiphenomenon, that it is not a unit, and that it is but an array of symptoms based upon a pathological element.

At the risk of repetition, we quote from Stricker[1], whose words are so much more forcible than anything we can say: "This fact of the common course of sensory and vaso-dilator nerves is finally suited to explain the connection between local inflammatory irritation on the one hand, and the inflammatory hyperæmia and pain which accompany the process on the other.

It was formerly supposed that the inflammatory irritation, inasmuch as it implicated the sensory nerves, caused pain by means of their centripetal conduction, and at the same time excited reflex action. Accordingly, it was said, inflammatory hyperæmia is produced by reflex action. But this assumption had no solid foundation. If every inflammatory irritation must first be conducted to the central nervous system, in order to produce hyperæmia (by reflex action) I can not see why this hyperæmia appears just where the irritation acts. , If powerful irritation produces reflex action, the reflex movements are not confined to the seat of the irritation. But inflammatory hyperæmia always appears at the seat of irritation only. *Ubi stimulus ibi affluxus* is the old rule, which holds good for weak as well as powerful inflammatory irritation.

It is therefore probable, that inflammatory hyperæmia is a direct local consequence of the local irritation. It is probable that the local irritation exists at the same time, in both the sensory nerves and the vaso-dilators of the implicated region. Whilst the former cause pain by means of centripital conduction, the latter produces a dilation of the results by means of centrifugal conduction."

At page 60 of the same work, this authority continues: "Positive and unequivocal proof that the growth and nutrition of tissues in general are influenced by the central nervous system, has, however, not as yet been furnished. We are, it is true, acquainted with affections of tissues which are due to diseases of the central nervous system; such as acute bed-sores in certain severe central diseases, and progressive muscular atrophy in connection with diseases of the ganglia in the anterior horns of the spinal cord (Lockhart, Clarke, Charcot). Recently, Ad. Jarisch has discovered a very important relation between diseases of the skin, and diseases of the spinal cord, likewise in the region of the anterior horns; the affection in one instance was a case of herpes iris, and in another, a case of pemphigus; though in this, the relationship was less pronounced. I have carefully examined the specimens in question. The disease of the anterior horns of the spinal cord was quite evident. These data, it appears to me, are very important for pathology. But whether we have to deal with centers which directly influence the tissues—that is, with the so-called trophic nerves—or with vaso-mator centers, is not known. Disease of the vaso-motor centers is certainly adapted to provoke pathological disturbances in peripheral organs, *i. e.*, in the region of distribution of the affected nerves." Thus it will be seen, that this able authority admits that diseases of the central nervous system may provoke peripheral diseases by reflex influence through nerves. Yet it is quite evident, that he maintains that such can only be provoked when there are found structural lesions of the nerve centers themselves.

If, therefore, no lesion of such centers are found in glaucoma, he would not, in consonance with his doctrines, attribute this affection to any influence reflected from the nervous centers to the eye. If, then, Mauthner and Stricker do not disagree, why may we not admit that the so-styled glaucoma is, essentially, an inflammation?

Finally, may we not conclude, that so long as the causes inducing the segmental feature of this disease are distinct from the phenomena induced in living blood-vessels and nerves; that, like parallel lines, never approaching, they are distinct in nature, yet related; and that blood-vessels and nerves are but subsidiary to the life and growth of organic cells and basis-substance; and that so long as these latter are intact, inflammation cannot be said to exist.

We may add, that we saw this patient May 6, 1883, and her vision with a + D 1.75 = .50, which is an improvement, because she requires a weaker convex glass to read than at the last examination: (+ D 3.0) then; now D 1.75.

ZANESVILLE, OHIO, May 9, 1883.

DISCUSSION.

Dr. Frothingham thought that the changes in the eye were of a cellular character, as shown by the two papers just read.

Dr. Lundy said that in many cases of inflammatory diseases we meet with distension of the eye-ball, more or less permanent, without it being glaucoma, and on the other hand there were cases of glaucoma without distention of the eye-ball.

Dr. Howe, of Buffalo, said that each such contribution to our knowledge of cataract only showed how much remained to be discovered in regard to its etiology. He mentioned a case of soft cataract in which the lenses were apparently exactly in the same condition, and yet under a similar operation the behavior was entirely different in the two. Reference was also made to experiments upon rabbits, in these animals there being a decided tendency to repair after injury of the capsule. With them considerable opacities of the lens will sometimes clear up, so as to leave only a slight cicatrix.

[1] The Inter Sys Surg. Ashhurst, Vol. I. p 18.

ON THE ELEMENTS OF PROGNOSIS AND OF THERAPEUSIS IN TUBERCULOSIS OF THE LARYNX.

BY J. SOLIS COHEN, M.D., OF PHILADELPHIA.

[Read to the Section on Ophthalmology, Otology, and Laryngology, June, 1883.]

While acknowledging the stern truth that the prognosis is always bad in tuberculosis of the larynx, it may be maintained that the prognosis is less unfavorable in certain groups of cases than in others; and that systematic therapeutic measures are capable of doing much more good in such cases than is generally admitted, even to the establishment of reparative processes in occasional instances.

A case mentioned in the edition of 1879 of a treatise by myself on Diseases of the Throat and Nasal Passages, as having lived more than eight years after the re-establishment of comparative health, is still alive and doing well; and several others that have been under my observation have recovered so far as to resume their occupations, and maintain a tolerable degree of health, and of enjoyment of their impaired lives.

The proportion of such recoveries is exceedingly small, less than one per centum; but the very fact of occasional recovery under treatment affords sufficient satisfaction to indulge the anticipation of considerable increase, as the elements of prognosis are more accurately ascertained and the institution of appropriate remedial agencies more thoroughly determined.

The probable hold upon existence, in cases of tuberculosis of the larynx, or the period to which the probable death of the patient may be protracted, are important subjects to the domestic circle in any individual instance; and any investigation is valuable which may throw light upon this important point in prognosis.

In collating the cases which have occurred in my own practice, I am appreciating the fact that there are certain objective indications, which, studied out and compared with future observations to the same purport, will aid us in estimating the length of days remaining at the disposal of the sufferer, and in prolonging the remnant of his existence by judicious therapeutic measures.

Acute tuberculosis of the larynx is almost certain to terminate fatally at a period varying from six weeks to six months. Some cases terminate still more rapidly, others linger a few weeks or months longer. Recovery is so rare that the accuracy of diagnosis may be fairly questioned in the few instances on record; especially in the face of the fact that the aspect of the disease and its immediate ravages bear very close physical similitude to the progress of acute latent, and tertiary syphilis. So close is this resemblance in many instances, that the test of antisyphilitic medication must be applied before a positive opinion can be pronounced as to the tuberculous or syphilitic character of the case.

Previous to the discrimination of acute tuberculosis of the larynx these cases were regarded as syphilitic, and the failures to cure it were attributed to the profound dyscrasia under which the patient labored. Hence the comparatively recent addition to nomenclature of acute tuberculosis of the larynx. Acute tuberculosis of the larynx is usually indicated by acute laryngitis following exposure to cold and wet, in which deglutition first becomes difficult and subsequently very painful. Intense pain in swallowing is often the only marked characteristic subjective symptom. Swelling of the epiglottis, with progressive ulceration from one or both sides, as revealed by laryngoscopic inspection, account both for the difficulty and pain in deglutition. Pulmonary symptoms of tuberculosis are evident on careful physical exploration of the chest, and serve to confirm the diagnosis of the disease, which steadily progresses as acute tuberculosis, and terminates fatally, as has been mentioned, at a period extending from six weeks to six months; secondary tuberculosis having taken place meanwhile in other organs adjacent and at a distance.

Painful deglutition, therefore, supervening upon an attack of acute laryngitis, and due to tumefaction and ulceration of the epiglottis, and of the fold of tissue uniting the epiglottis to the pharynx, is indicative of acute tuberculosis, with rapidly fatal termination.

The local use of morphia by insufflation, or of morphia and iodoform in powder, presents the most efficient means available of diminishing the pain on deglutition. Before the sedative powder is blown upon the parts they should be thoroughly cleansed by an alkaline douche or spray, to enable the medicinal agent to be applied to the diseased surface, instead of being merely commingled with the secretions which cover it. The solution used most frequently for this purpose in my own practice, consists of five grains of borate of sodium, one drachm of glycerine, and seven drachms of tar water.

Far more frequent than acute tuberculosis of the larynx is the chronic form of the disease, of which we may differentiate several varieties of progressively protracted duration.

The shortest of these varieties becomes engrafted, so to speak, upon that variety of pulmonary tuberculosis characterized by rapid caseation of the pneumonitic foci. It occurs early in the malady, coincidently, perhaps, with the giving way of the pulmonary tissue, and runs its course to a fatal termination in from six to eighteen months.

It may be regarded as a sub-acute tuberculosis of the larynx, or as florid chronic tuberculosis. It is a secondary tuberculosis in the true sense of the term, although the subjective and objective laryngeal symptoms may precede those of the lung disease.

It is indicated by congestive catarrhal laryngitis, associated with localized or catarrhal pneumonitis, and followed by multiple minute ulcerations of the laryngeal mucous membrane. These ulcerations take place most frequently upon the posterior or lower face of the upper or free portion of the epiglottis, but they occur upon other localities also. These ulcerations extend in depth and in periphery, and coalesce when contiguous. Intumescence of the epiglottis gradually supervenes, followed frequently by intumescence of the ventricular bands and of the vocal bands. Similar intumescence takes place, but less frequently, in the inter-arytenoidal and arytenoepiglottic folds. The breathing space is often so se-

riously encroached upon by these tumefactions, that considerable dyspnœa ensues.

Meanwhile existing ulcerations extend, and new ulcerations occur and extend likewise, until in some instances the internal surface of the larynx is almost surrounded by irregular zones of tissue losses, rendering its aspect exceedingly ragged. Fungous granulations rise above the surface of some of these ulcerations, in many cases still further impeding respiration, and interfering with expectoration of the various products of hypersecretion and ulceration. The destructions of tissue, tuberculous and suppurative continue progressively throughout, involving all the component structures including cartilage, portions of which become detached, and become partially expectorated in detritus, fragments, or in masses. The destruction of the epiglottis takes place from above downward as the rule, but occasionally laterally, as in the acute variety proper. Secondary tuberculosis takes place in other organs, adjacent and at a distance.

The differential indication of this form of tuberculosis, in which the tenure of life may be estimated at from six to eighteen months, according to the activity of the process, and the existing pulmonary complication, is to be recognized by the initial multiple minute ulcerations upon the epiglottis, particularly, in the early stages, and the subsequent tumefactions at the anterior portion of the larynx, followed by progressive extensive ulcerations, tuberculous and suppurative. Ulceration limited to the epiglottis indicates much more rapid progress to the fatal issue. Impairment of voice, dyspnœa, and later in the case dysphagia and painful deglutition, are the most characteristic subjective local symptoms.

Much more relief can be afforded by treatment in these cases than in the acute variety previously described. The constitutional treatment required is that adapted to tuberculosis of the lungs, irrespective of the laryngeal complication. Locally, much can be done to afford comfort by keeping the parts as cleansed as possible from products of secretion and ulceration, by alkaline sprays propelled upon the parts at regular intervals. For this purpose the solution of borax in tar water, previously mentioned, may be employed by the patient several times a day, a few drops of the sedative solution of opium being added to relieve pain and repress cough. Inhalations of terebinthinates, creosote or carbolic acid, in spray or in vapor, to follow the cleansing process, are beneficial both for antiseptic and for astringent and slightly stimulating purposes. Insufflations of powdered iodoform propelled directly upon the parts after previous cleansing, are grateful and soothing. The disagreeable odor of iodoform can be tolerably well masked by the addition of a minim of attar of rose to the drachm, or five or more minims of essence of rose geranium.

Harrassing cough from the local irritation of the ragged mucous membrane and the secretions adhering to it, can be much diminished by wearing a light respirator of perforated zinc, or of buckram, or some similar contrivance, in front of which a small fragment of sponge can be confined, upon which five or more minims of terebene, oil of turpentine, creasote, carbolic acid, or eucalyptol may be dropped from time to time, as it evaporates, with the occasional addition of a rather smaller amount of chloroform.

In the earlier stages of dysphagia the preliminary deglutition of a teaspoonful of sweet oil often facilitates the immediate deglutition of nourishment, by coating the parts with protective fluid and by lessening the friction. When extensive ulceration prevents this relief, the best reliance is upon morphia, as in the acute variety.

The more chronic varieties of laryngeal tuberculosis occur in the more torpid cases of pulmonary tuberculosis beginning in localized pneumonias. The larynx does not become involved until the disease has considerably advanced in the lung, and softening is imminent, or is already in progress. These cases last from two to four years on the average, and sometimes much longer.

Pallor of the mucous membrane is perhaps the earliest marked characteristic of this variety. The participation of the larynx is passive, so to speak, rather than active, and the tuberculous process is much slower in its manifestation and its progress.

Little by little the component structures of the borders and interior of the larynx lose their marked outlines and become more and more tumid. The sharp edges of the aryteno-epiglottic folds and other tissues become thickened and rounded off; while circumscribed tumefactions of much more marked character take place at different points literally supplied with normal lymphoid cells.

The supra-arytenoid cartilages and the aryteno-epiglottic folds undergo this tumefaction much more frequently than any other tissue. The epiglottis and the interarytenoid fold are two other prominent points for the process.

The sharp and peculiar outlines of the supra-arytenoid cartilages become transformed into characteristic globose tumors tapering off pear-shaped-like into the aryteno-epiglottic folds, with gradual obliteration of all the lines of demarcation between the folds and the contained cartilages; a transformation so characteristic as to be almost sufficient in itself to indicate pulmonary tuberculosis, aside from investigation of the chest.

In the inter-arytenoid fold a tumid projection gradually develops, sometimes condylomatous, more rarely acuminated, which prevents approximation of the posterior portions of the vocal bands, and thus entails aphonia or great impairment of voice.

The epiglottis increases in thickness to several times its normal dimensions, fails to occlude the larynx in deglutition and incites great care in swallowing, lest particles enter the air-tube.

The tumefaction in the epiglottis and aryteno-epiglottic folds is sometimes increased by collateral œdema, which may be so great as to produce veritable stenosis, threatening asphyxia.

These cases are slow in progress as a rule, unless the patient be the subject of marked cachexia, when the destructive process may ensue as rapidly as in the slower cases of the subacute variety. The tumefactions may remain the only visible objective indica-

tions during the entire malady, but in advanced stages ulcerations are liable to ensue as in the other varieties, and not only at the points mentioned but in other parts of the structures.

Pallor of the mucous membrane of the larynx of a phthisical subject, followed by the circumscribed tumefactions just alluded to, form the chief indications of the slower variety of tuberculosis of the larynx in which the prognosis of a more prolonged existence may be given.

The tardy progress of the morbid process affords better opportunity for beneficial results from therapeutic measures; and their judicious selection at an early period in the disease may not only prolong the life of the patient, but even start him on the road to recovery.

The pallor of the mucous membrane of the larynx, evident as it often is before anæmia is recognized elsewhere, indicates the advisability of the administration of meat as food and iron as medicine. A meat diet requires more or less exercise in the open air, or its substitute. Inhalations of compressed air by some of the methods now in vogue, massage of the limbs, and similar methods promote oxidation of the products of meat digestion, and thus invigorate the patient. Enrichment of the blood by the meat may be supplemented by the administration of iron. Tincture of the chloride of iron in ten minim doses, with fifteen minims of dilute phosphoric acid and a teaspoonful of the best syrup of the hypophosphites, preferably of lime in most cases, if that is at his command, is the prescription most relied upon by myself, given after meals in a tablespoonful of water.

The tumefactions are well painted every two or three days with equal parts of the compound solution of iodine and glycerine, or with a few drops of solution of iodine and of carbolic acid to the ounce, and the parts kept free as possible from secretory products by the alkaline spray already mentioned.

When ulceration takes place, antiseptics are added to the treatment locally and by inhalation.

Compressed air, alkaline sprays, iodine locally, iron internally, animal diet, and as free exposure to the air as practicable, constitute the therapeutic measures which have been followed by the best results in my own hands; and by these means modified or supplemented, as occasion may indicate, with such general measures, hygienic and remedial, as are indicated from time to time, I have reason to believe that the course of certain forms of tuberculosis of the larynx may be retarded in occasional instances to such an extent as to give the patient a chance to recover.

QUESTIONS ON THE ETIOLOGY OF SOME FORMS OF LENTICULAR OPACITY.

BY J. L. THOMPSON, INDIANAPOLIS.

[Presented to the Section on Ophthalmology, Otology and Laryngology, June, 1883.]

In looking over my records of cases for a number of years back, affections of the crystalline lens are found to sustain a relation of 9 per cent, and of these, a very large majority are opacities, idiopathic, and traumatic, mostly the former. In these I have been very much struck by the very large number which have taken place below, as compared with the upper peripheral portion of the lens, and still more surprised at seeing the opacity so often at the lower-inner margin. On first meeting with these, my practice was to inform those who were so affected that they had commencing cataracts, and I usually requested them to call on me from year to year that I might watch their progress toward ripeness, but after observing them for a number of years and seeing no increase in their extent, I soon became more guarded in prognosis and, indeed, began to ask myself whether or not some of them were congenital and similar to the arcus senilis (a very wrong term of course for congenital cases). But remembering that though I had frequently seen the gerontoxon in persons of all ages, in the youthful just as well as in the aged, yet the peculiar opacity of which I speak rarely ever came under my notice in persons under forty, so it seemed to be a senile change. I was still more convinced of this by witnessing a case almost at its very inception in a lady eighty years of age, whose eye I had examined several times before the opacity made its appearance. She first came to consult me on account of dimness of vision which she feared was caused by cataract, indeed she was morbidly sensitive on the subject of cataract. I examined her under a mydriatic and found each lens perfectly clear (or as clear as one ever finds it in an elderly person), with not the least trace of opacity in either; her dimness of vision being the result of myopia, with hyperæmia of the choroid and retina. I informed her of these facts, and in answer to her questions upon the subject, told her that in all human probability she would never be troubled with cataract. In just one year from that date she again called upon me, when an opacity was readily seen in each lens downwards and inwards, greater in the left than in the right eye. I saw her once or twice a year until she died, always comparing her condition with the pencil sketch taken when she was first examined, and there never was a particle of increase in the breadth or depth of the stippling. All through my case book are these opacities to be seen, and the uniformity of their position viz. at the lower inner margin of the lens is very striking. It certainly must be more than simple coincidence that so many of these cases should have occurred in my patients; and yet in conversing with many of my acquaintance who practice in this department of the field of medicine, they seem not to have had their attention called especially to this feature of it; nor do I remember having seen it mentioned in any of the eye literature which has fallen under my notice. 'Tis true one often reads of small opacities forming a circle around the periphery of the lens in elderly persons, which Dr. De Wecker looks upon as being "clearly connected with the movements of shrinkage in the nucleus, and an accompanying separation of the fibers in the portion corresponding to the opaque ring, while the fibers themselves have undergone no appreciable changes." But in such cases the upper portions are as often, it seems, affected as are the lower; and yet as far as my memory serves

and my books show (I keep a pencil sketch of all intraocular affections) these opacities occur at least twenty times in the lower, to one in the upper, and ten times in the lower inner to one in the lower outer portion. Occasionally one meets with them in both inner and outer lower portions of the same lens, but the inner are invariably more pronounced than are the outer; another remarkable peculiarity is, that they are often met with almost exactly alike in each eye.

Indeed these cases are so numerous that they often come to me in pairs, as my books show on several pages, but this is a coincidence which often takes place in the practice of us all. Many of these patients have I seen, from time to time, for years afterwards and they nearly all seemed to remain as when first examined. It is evident that they widely differ from the congenital gerontoxon which has, or seems to have the impression of the zonula upon it. That gravitation is an important factor in the position of these clouds there can be no doubt, and the fact of their sudden appearance and their remaining ever afterwards just as when first seen, shows that some temporary change in the nutrition of the tissues similar to those which follow rheumatic, gouty, and other inflammations which are often followed by degenerative deposits, must obtain in thèse cases also. Were they simply fatty degenerations of the fibrillæ of the lens, one would certainly meet with them as frequently in the upper as in the lower peripheral portions.

OPACITIES OCCURRING DURING CHOROIDAL INFLAMMATION.

Doubtless all present can recall one or more cases of opacity of the lens occurring very suddenly during the treatment of choroido-hyalitis with floating bodies in the vitreous chamber. A typical case of this kind came under my notice in a Doctor E. aged 26, single, who consulted me some years ago on account of the above named floating bodies in the vitreous humor of the left eye, which he informed me had existed about four years. When I first examined him the eye was so filled with these floating bodies as to render the fundus very indistinct in some places, and totally so in others, thereby reducing vision to $\frac{20}{\text{C.C.}}$ He said that since he first discovered them he had been better and worse; that occasionally they would partially disappear, and the vision would slightly improve, but that they never left entirely, nor did vision ever reach the normal acuity. The right never participated in this abnormal process, it being entirely confined to the left eye. His health, he said, had always been good, that he never, so far as he was aware, had been troubled with any form of heart disease, and was confident that he never had syphilis. He looked delicate, tired and under-tone, but he had been taking large doses of iodide of potassium, which may have caused this appearance. I placed him on the use of jaborandi, used artificial heat and counter-irritation occasionally, but without good effect. He called on me very often, but the eye remained apparently about the same, until on one occasion the anterior chamber was found to be so shallow that the iris rested against the cornea. Prior to this time the lens had been as clear as one ever sees it, but in five days' time it became thoroughly opaque throughout its whole extent. For a period of nine months he had no visible anterior chamber, but at the end of that time it was re-established, and the tension, which was formerly — 1 became normal. At this date his field of vision is good, he sees one's hand between him and the light, and were one examining him as to his prospects for a cataract extraction without having a thorough history of his former condition it would be pronounced a very promising case.

A very similar one to the above occurred in a patient aged 50, who consulted me for a dimness of vision which I found to be from choroido-hyalitis with floating bodies in the vitrious. "Is it catharack, docthur?" was the question. "No;" and I took great pains to convince him that it was nothing like cataract. Again in two weeks did he call, with the same question, with his eye in the same condition; but in one week more he had a well-pronounced opacity of the lens, which on former examinations was as clear as ever it is seen. "And do you tell me that it isn't catharack?" was the first question with which he greeted me, he having been to another physician in the interval of his visits to me. What could I say to an ignorant patient under the circumstances? Such cases are exceedingly trying, as well as interesting. What a help it would be to one did he know something more concerning their etiology, that he might know just when and in what cases to predict them. Many, with choroidal troubles similar in all appearance to the above, will go on for years, becoming better and worse until vision equals simple perception of light and yet the lens will remain clear, while in others apparently no worse nor even so severe, cataract will be developed almost at the very inception of the malady. In all probability these cases of former choroidal inflammation often cause our smoothest and best performed cataract operations to result disastrously. Diabetes, again, is a well-known cause of rapid opacity of the crystalline. Several cases have come under my care in which the person has been able to read the newspaper readily ten days before the date of his coming and yet an examination has revealed the fact of a completely opaque lens in each eye. Other cases, again, often go on for years with urine of the same specific gravity, and all other conditions apparently similar, and yet no sign of lenticular opacity ever takes place.

OPACITIES FOLLOWING OPERATIONS AND WOUNDS.

How common it is to meet with an opacity of the lens very soon after an operation for artificial pupil in cases of complete synechia posterior. The lens remains clear for some time after the operation, except a few spots of pigment remaining where the iris was formerly adherent, but in a few weeks cataract is made manifest, so it is often after an iridectomy for glaucoma, where we are positive that neither knife nor forceps ever touched the lens capsule. The question arises, in what way or manner does the operation so interfere with the nutrition of the lens as to cause its rapid degeneration in one case, while in ninety-nine other similar ones no such result follows an apparently identical operation?

Opacities resulting from foreign bodies entering

into or passing through the lens are, as you are all aware, by no means infrequent. In a few of these the opaque spot has remained partial—sometimes even it becomes smaller—years afterward than just after the wound. Especially is this so where a very fine body jams through into the vitreous with great force, while wounds from pins, or bodies, be they never so small, which have been passed only just through the anterior capsule and been withdrawn are almost invariably followed by complete opacity sooner or later. The following unique case is, however, an exception: Chas. Lutz, aged 22, residence Terre Haute, Ind., was sent to me by his physician on account of an injury to the right eye by a piece of percussion cap three days before. On examination I found that it had passed through the lower part of the cornea and iris into or through the lens, the last named body heing quite opaque throughout—at least its lower two-thirds.

As he could not remain under my care I wrote to his physician, suggesting ice, atropine, and leeches if the inflammation ran high, and requested that he be sent down if much pain and tenderness in ciliary region became manifest. I heard that he was doing well two months subsequently, and did not again hear from him until I met with Dr. J. P. Farrell, of Terre Haute, about three weeks ago who informed me of the following very remarkable behavior of the case. When the doctor returned to Terre Haute from Europe the patient immediately called upon him, when a projection of the iris was visible, looking as if a body was lodged behind it. Again, in a few weeks, some kind of a foreign body was seen in the lower part of the aqueous chamber. Again in a few weeks, it was seen in the tissue of the cornea, and, lastly, the young man accosted the doctor on the street to inform him that he had the foreign body at home, he having picked it from the eye. At my request Dr. Farrell kindly wrote me the following letter on June the 1st inst.:

"* * * I found the eye quiet, presenting a ring-shaped, or, rather, semicircular white opacity at the lower and inner quadrant of the cornea. In the space included between this semi-circle and the corneal border there is a dark point evidently due to adhesion of iris to inner corneal surface. Pupil eccentric and pear-shaped, due to ant. synechia. Lens clear, with the exception of the slight degree of opacity along a cicatricial line which is seen in the ant. capsule $V = \frac{15}{L}$. The eye is entirely quiet and has given him no trouble, though actively engaged at his work, that of a nail-feeder, which requires close attention.

"The foreign body, I may add, is about 2 mm. square, being of the thickness of good writing paper. Further, I wish to say, that running from the situation of the cicatrix on the capsule, to the point of union of the synechia to the cornea, is a white band to which the lacerated iris is attached. This band I once thought was the lens capsule, but yesterday I came to the conclusion that it is not.

"Signed, J. P. FARRELL."

The above questions have been of deep interest to me, and doubtless similar ones have often agitated the minds of many others, and, as no better opportunity will ever offer for an interchange of views and the relating of personal experiences upon the above questions, I therefore give it as my reason for bringing the subject before you on this occasion.

DISCUSSION.

Dr. Noyes, of New York, said he had seen similar cases quite frequently, and had them divided into two classes—those accompanying myopia and being of a molecular form, and those in which the opacity is striated and caused by choroidal retinitis. He thought the opacity was due to impaired nutrition of the hexagonal epithelium, and that it required years for its development.

Dr. Frothingham said that the paper was the result of carefully kept records, and if every one would take the trouble to keep such records, many points about which we are still in the dark might thereby be cleared up.

Dr. Thompson, in closing the discussion, said that he had nothing further to add except that he had found his records of cases of great advantage to him.

THE ACTION OF NITRATE OF SILVER UPON THE MUCOUS MEMBRANE OF THE THROAT AND NOSE.

BY CARL SEILER, M.D., OF PHILADELPHIA.

[Read to the Section on Ophthalmology, Otology, and Laryngology.]

It is not my intention to present an exhaustive essay to the Section, but simply to make a few remarks concerning the action of the silver salt upon the mucous membrane, and to record some observations made by myself, with the hope of giving rise to a discussion on this interesting subject.

We are all familiar with the popular notion that nitrate of silver is a caustic, and is held in abhorrence by the patients, and used sparingly and in weak solutions by the physician in dealing with inflammations of the mucous membrane of the throat and nose. It may, therefore, be startling to you when I make the statement, the conclusion arrived at from clinical experience and microscopical examination of the tissue, that nitrate of silver, solid or in solution, is not a caustic—*i. e.*, it does not destroy the epithelial covering, and its action is different with the strength of solution used. The action of the solid stick or super-saturated solution upon the undenuded mucous membrane is first a combination of part of the silver with the albumen, mucine, and chlorides contained in the secretion of the immediate neighborhood of the spot touched, and the formation of a thick, tenacious, yellowish white pellicle adhering tightly to the epithelial covering. The surplus of silver which is not thus converted penetrates the interstices of the epithelium and becoming reduced to the oxide of silver or deposited as very fine granules of oxide of silver which act as foreign bodies and give rise to congestion and inflammation in their immediate neighborhood, which continues with more or less severity until the tissues

have become accustomed to the presence of the foreign body. The pelicle formed, although at first tightly adhered to the surface, soon becomes loosened as the increased blood supply hastens cell death, and is pushed off by the exfoliation of the upper layer of epithelial cells, leaving underneath it a healthy surface covered by epithelial cells. A section carried through the mucous membrane which has been acted upon by the stick or a super-saturated solution does not show any cell disintegration by the drug.

Clinically we observe that the solid stick or a super-saturated solution does not produce much pain on the healthy mucous membrane, but acts as a localized stimulant and, through the formation of the pelicle, as a protective. When applied, on the other hand, to a surface denuded of its epithelial covering the solid nitrate of silver, by combining with the albumen and protein of the granular cells, forms a similar pellicle as is seen on the healthy surface, but melts the upper layer of the cells. It thus again acts as a protective and local stimulant exciting healthy granulation and the reformation of the epithelial covering.

Experiments carried on with solutions of different strengths, such as 250, 200, 180, 120, 60, 40, 20, and 10 grs. to the ounce of water, gave much the same results, when sections were made and examined under the microscope as were noted when the solid stick or a super-saturated solution was used, except that with the decreasing strength of solution, a decrease in the thickness and firmness of the pellicle, and a diminution in the number of granules of oxide of silver were noticed. The experiments were made on rabbits and dogs at the pathological laboratory of the University of Pennsylvania, and the silver salt was allowed to act upon the mucous membrane from 10 to 20 minutes, except in the case of the experiments with the solid nitrate of silver, when, in some instances, 62 and 24 hours were allowed to elapse before the animal was killed and the tissue prepared for section. The sections were made for me by my friend Mr. ——, of the University.

The clinical observations with the different strengths of solution extend over a number of years, and were made on myself as well as a large number of patients, and may be summed up in a few words.

Solutions of from 250–120 grs. strength act similarly to the solid stick—that is, little or no pain is felt on contact; a thick pellicle formed, and the localized inflammation is of short duration. Solutions from 120–60 grs. produce no pain whatever; on the contrary, act as local anæsthetics. When applied to an inflamed surface they produce no perceptible localized inflammation, but stimulate glandular secretion. The pellicle formed is but slightly adhered, and can be pulled off after a few hours. They also act as powerful astringents, and frequently will cut short an acute inflammation of the mucous membrane when they are applied before inflammatory infiltration into the tissue has occurred—that is, within twenty-four hours from the onset of the inflammation.

Solutions of less than 60 grs. produce the more pain the weaker they are, which is also more and more lasting, so that the anæsthetic and astringent action diminish on an equal ratio with the strength of the solution, while the stimulant and irritant action increases as the solution becomes weaker. The protective quality of the pellicle, which, however, is formed even with a 10-gr. solution, and which probably has given rise to the belief that the silver salt is a caustic by having been mistaken for an eschar, diminishes also with the strength of the solution. The glandular secretions are materially increased by these weak solutions. Thus it will be seen that nitrate of silver, like many other drugs, should not be used indiscriminately, but that the strength of the solution should be properly gauged by the action desired. For if we want an astringent, sedative and protective action, we should not use a solution of less than 60 grs., while, on the other hand, if we want a lasting stimulant and irritating action, the weaker solutions are indicated. Also if we want to increase the glandular secretion or want to induce absorption of old inflammatory deposits, the irritant action of the weak solutions is of great value. When a long-continued irritating and stimulating action is desired, such as is necessary in atrophic nasal catarrh, for instance, I have found that solid nitrate of silver, the fine powder highly diluted with starch powder, is preferable to a solution, since the fine granules of the silver salt in contact with the atrophic mucous membrane set up points of inflammation and increased blood supply all over the mucous membrane, thus stimulating the few remaining glands to increased action which in time becomes permanent.

Want of time and opportunity have prevented me from making observations on the action of the silver salt on the mucous membrane of the eye, but I have no doubt that the action is similar, if not the same, except that on account of the large amount of chlorides in the secretion of the lacrymal gland a larger proportion of the nitrate is at once converted into the inert and insoluable chloride of silver.

DISCUSSION.

Dr. Jarvis fully agreed with Dr. Seiler's views; and Dr. Roe said he also had found, like the author of the paper, that a solution of from 60 to 120 grains to the ℥j of water will almost invariably cut short an acute tonsillitis.

Dr. L. Turnbull said he had seen solid nitrate of silver produce sores upon the skin, and that he was in the habit of destroying polyps with the solid stick.

Dr. Conner, of Detroit, said that in the main he agreed with Dr. Seiler, but had seen a case in which serious sloughing of the tissues around the eye had followed the application of solid nitrate of silver. He thought a great deal depended upon the length of time that the drug was allowed to act upon the tissues. All other speakers agreed with Dr. Seiler, that nitrate of silver was a most valuable drug if properly used, but disagreed in regard to the non-caustic action of the solid stick.

Dr. Seiler, in closing the discusison, said that he could explain the production of sores and sloughs by nitrate of silver, which he had frequently seen. They were caused, not by the destruction of the epithelium,

but by the localized inflammation due to the irritant action of the granules of oxide of silver which are deposited in the dermal and subdermal tissue, thus hastening cell death and producing ulceration, as any other localized inflammation may do.

FOUR CASES OF EYE DISEASE FOLLLOWING BRAIN DISEASE.

BY HENRY G. CORNWELL, M.D., COLUMBUS, O., PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY IN STARLING MEDICAL COLLEGE.

[Read in the Section on Ophthalmology, Otology and Laryngology, June, 1883.]

HEMIANOPSIA HOMONYMA DEXTRALIS AFTER APOPLEXY.

Mrs. S., aged 65, an intelligent lady of Columbus, was sent to me by Dr. Fullerton, her family physician, February 1, 1883, for advice concerning a defect of vision, which had made its appearance three months before. The previous history of her case is as follows:

Two years before she had an attack of apoplexy, was comatose for twelve hours, and remained hæmiphlegic on the left side for nine months, improving gradually until she entirely recovered without sequellæ from her illness, and enjoyed good health for fourteen months. One month before I saw her she was about to call on some of her friends, and as she ascended the steps her vision became suddenly obscured, and on entering the house she observed that she could only see the left half of objects toward which her eyes were directed. Her mental faculties remained clear, and she was absolutely free from all other symptoms of intra-cranial disease. Her hemianopsia (it being right-sided) prevented her from reading, a thing which distressed her exceedingly. On examination I found central vision $\frac{xx}{20}$, or normal. Entire absence of all visual impressions, except for light over the right half of the visual field, the line of demarcation being sharply defined and extending to the macula lutea. Visual and color sense normal over the left half. Ophthalmoscopic evidence negative. Her condition remains, after three months, unchanged.

My view of the pathological condition in this case is, that at the time of the sudden appearance of the hemianopsia the patient had a second hæmorrhage of slight extent, doubtless into the occipital lobe of the left hemisphere, the injury to the brain substance being only sufficient to produce the visual defect.

A CASE OF MONOCULAR OPTIC NEURITIS, FROM BRAIN DISEASE.

J. H., æt. 26, of Mt. Vernon, O., a machinist, single, visited me October 20, 1882, on account of a failure of vision in the right eye of three weeks duration. From his history he had evidently contracted syphilis five years before. On examination, the vision of the right eye was reduced so that he could see only to count fingers at five feet. He had also paralysis of the third nerve on the same side, producing ptosis, a dilated and fixed pupil, and divergent strabismus. The sense of smell was wholly gone on that side. The patient also complained of severe frontal headache, and became at times very giddy and faint. The ophthalmoscope revealed a violent monocular right-sided optic neuritis, the swelling amounting to three dioptrics. Left eye vision and ophthalmoscopic appearances normal. The bichloride of mercury and iodide of potassium were given in large doses for some weeks, and improvement followed so far that some movement of the globe inward could be obtained. Atrophy of the optic nerve succeeded the neuritis, and vision was reduced to perception of light. No further improvement followed treatment.

The eye-condition in this case evidently was due to an intra-cranial gummous formation at the sphenoidal fissure and optic foramen on the right side.

PARALYSIS OF SIX OF THE CRANIAL NERVES FROM BASILAR MENINGITIS.

J. D., æt. 37, a dentist of Columbus, visited me May 18, 1883. During the war, he received a flesh wound in the right forearm, and was left uncared for in a vacant house for 48 hours; the nights were very cold. Following this he had swamp-fever, and subsequently became seriously ill with some form of brain disease. His recovery was complete, except so far as his eyes were concerned, they having remained unchanged since his convalescence, except that his visual power is monthly decreasing.

Status præséns:—Patient in an advanced stage of pulmonary consumption; no history of syphilis. Absolute immobility of both eyeballs, and double ptosis, from paralysis of the third, fourth and sixth pairs of cranial nerves. Paralysis of the facial on both sides; some impairment of cutaneous sensibility over the face. Vision, ability to count fingers at five feet. The optic nerves in an advanced stage of secondary atrophy; the irides and ciliary muscles not paralyzed. He has never had any form of general paralysis, and his intelligence has not been impaired since his illness.

This case exhibits paralysis of six pairs of the cranial nerves. I regard the condition as having been due to a basilar meningitis which succeeded the intermittent fever.

A CASE OF CHOKED DISC ASSOCIATED WITH A TUBERCULAR TUMOR IN THE CEREBELLUM.

On the first of April, 1882, I was invited by Dr. Buckner, of Youngstown, O., to make an ophthalmoscopic examination in a case of brain disease, the previous history of which is as follows:

The patient, H. W., æt. 26, a locomotive engineer, had suffered for some weeks with intense frontal headache and lancinating pains shooting through the head from the occiput to the vertex. He had frequent attacks of giddiness and faintness, and on several occasions had convulsions after running. He had also become totally deaf on the left side. His vision was $\frac{xv}{20}$, both eyes. No marked change in the visual field. Ophthalmoscope revealed choked disc; the swelling of the heads of the nerves measured five dioptrics. Rapping on the head did not give rise to pain. The tuning-fork was not heard on the left side. Brain tumor was diagnosed, and unfavorable prognosis given. No evidence of syphilis

was obtained. Bichloride of mercury and iodide of potassium were prescribed.

I saw him a month later, and he had become wholly blind, and had had frequent convulsions in bed. During the next month his convulsive attacks appeared daily, and he died comatose.

At the autopsy, in the left lobe of the cerebellum an abscess was found, containing about a teaspoonful of pus, and close to it a tumor the size of a marble, in the center of which was a calcareous deposit the size of a hemp-seed. The tumor was on examination found to be of the tubercular variety.

SYMPTOMATOLOGY IN INFANTS.

BY WILLIAM B. ATKINSON, M.D., LECTURER ON DISEASES OF CHILDREN, AT JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

By many persons, the study of disease in infants is regarded as peculiarly difficult, because of the absence of speech by which to indicate the presence and location of certain symptoms. The late Prof. C. D. Meigs, on the contrary, was wont to felicitate himself on this as an advantage. He would say, "An infant never tells a lie." It cannot imitate the young lady who assures the doctor that she is dying, or suffering unspeakable torments, when the next hour she is ready to whirl till daylight in the dance, or fill her stomach with a *melange* as curious as it is hurtful.

In the investigation of all forms of disease, whether in children or in adults, we are generally too apt to jump at a conclusion, and make a diagnosis which would often be different were it prepared with less haste, and with the aid of other factors. Careful, guarded observation should ever be the rule. The whole ground should be accurately surveyed; each symptom, each point compared, and the result will prove more satisfactory than is so frequently the case where, after a few hurried questions addressed to a stupid or careless nurse, and an equally careless examination of the infant, the physician supposes what is wrong, and writes a prescription which may be harmless; often is useless. It would be better to leave the child to nature, and give a placebo to satisfy and occupy the nurse, who will be sure to administer some of her own foolish mixtures if not otherwise employed.

At the outset, the most important matter to the physician is a thorough knowledge of the infant as a healthy being, that he may have a means of comparison by which to judge as to the presence or absence of disease. It is seldom, however, that these points are considered, and more rarely are they studied.

In this connection, I would refer to my lecture entitled "The Conditions of Life in a Healthy Infant."

Additional force is given to these remarks by my observing, on a recent occasion, the great want of knowledge in the profession as to the commonest points in child-life, and a learned authority gives a striking example of the same, where, at a criminal trial, the experts summoned could only give the most vague and general ideas as to the quantity of food required for a healthy child at a given age.

Starting, then, with a well-grounded knowledge of the child as it should be in health, we make a careful examination of the little one at every point. Its history and its surroundings must be equally inquired into, that we may thus be enabled to eliminate any points tending to confuse in grouping the results of these inquiries.

In such an examination, we are largely, if not wholly dependent upon the objective symptoms.

We must learn from the attitudes; the movements; the cries; the skin; as well as the pulse, respiration and temperature. In fact, the last three are least to be depended upon.

In health, the attitude of a young child should be a natural, easy one, with no appearance of strain in any of its motions. Here, however, is room for error, unless we possess a knowledge of the special case which we are investigating, as children are often observed to assume in health an attitude simulating that of disease. Hence, a peculiar or apparently unnatural position should not cause alarm unless associated with other positive symptoms. We have frequently seen infants sleeping with the head drawn far back, similar to the position of one suffering from cerebro-spinal fever. When it is observed that the movement of any part causes pain or uneasiness, that point should demand the closest investigation, and at the same time a search should be made as to the occurrence of any causes likely to have produced such a result.

Perhaps the first point which attracts the attention is the face of the infant. While we cannot fully agree with some authors that there is such a close relation between the expression of the countenance and the seat of disease, yet we know that much is to be learned here.

Pain is at once shown by the face.

Corrugation of the brow, twitching of the corners of the mouth, tremulous movements of the eye-lids, are generally prodromes of convulsions, and when associated with other symptoms should lead to the belief in the presence or cerebral trouble.

Pallor of the countenance almost invariably is present in intestinal diseases, and usually accompanied by a fretful, peevish look. This pallor, with emaciation of the features, is seen in all diarrhœal affections. When the exhaustion is great, as in cholera infantum, these symptoms are present to a marked extent, as seen in those sudden attacks where, within twenty-four hours or even less, the infant resembles a little old person, and is so altered that those around fail to recognize a familiar feature. Here we have the hollow cheek, the sunken eye with half-closed lid, the waxy, cadaverous look, a dark circle surrounding the mouth, deep blue circular lines beneath the eyes, the pinched nose, the mouth half open, disclosing the tongue, which lies parched in its cavity, the cold and feeble breath, all witnessing that great exhaustion preceding dissolution.

When the face is flushed, hot, swollen, we find acute brain disease. When the face assumes a dusky hue there is from some cause imperfect æration of the blood, as in congestion or other lung trouble. In cases of inflamed lung the hue is brighter, and asso-

ciated with difficult breathing, as specially shown by the rapid dilatation of the alæ nasi, and the efforts at inhalation.

In the very young, the infant that has attained to but few days or hours, deep blueness of the face and general surface indicates imperfect action of the heart and its appendages. This rarely fails to be seen from birth, is usually increased by any effort or excitement, and must be regarded as a very grave symptom.

Discoloration of the skin should always be examined with care, lest an error be made as in icterus. In very many infants more or less yellowness of the whole surface appears during the first few days, and as readily disappears. This should be borne in mind.

Again, the attack of strophulus, or gum, as it is called, rarely fails to occur within the first week or two, and has even been taken as the evidence of an attack of an acute eruptive fever. Such errors are constantly seen, as where the bites of insects have been taken for an eruption. In fact many ridiculous instances might be mentioned.

Pain is shown by a sudden contraction of the countenance; when more severe, accompanied by a sharp cry or moan during sleep, and when associated with the drawing up of the knees, will indicate that the seat of the pain is in the abdomen. In such instances the face becomes suddenly pale, with a whitish or bluish circle around the mouth.

When the infant has pain in the head, it is indicated by sudden and more or less constant contraction of the brows. This may be neuralgic, and then usually intermittent; but when protracted it should be regarded as of a grave import, as showing the presence of meningeal or cerebral disease.

The eyes should especially attract attention. Strabismus, when not habitual, as the congenital form, or that resulting from previous diseases, by itself indicates chronic meningeal disease, and is always an unfavorable symptom. A turning in of the eyes almost invariably occurs prior to a convulsive attack, and generally soon disappears after the cause is removed. Foreign bodies in the alimentary tract, as indigestible matters, masses of worms, scybalous masses, constantly cause this symptom, and by a continuance of the irritation produce convulsions.

The pupil of the eye is not so valuable as a diagnostic aid, because of the constant radiations to which it is subject. Irregularity of the pupils—one being contracted, the other dilated—would indicate a lesion at the base of the brain. Fixed dilatation or contraction are to be regarded when other disease is present, such as alimentary trouble, as showing the involvment of the brain. In such cases care must be taken to ascertain whether the infant has been habituated to the use of opium. Perhaps this is one of the most important questions that can be asked, and should always form a part of the preliminary examinations when obtaining the history of the child. In inflammation of the brain there is usually, at first, great contraction of the pupils; as the attack progresses dilatation follows, with complete insensibility to light as the end approaches.

Photophobia is seen in measles, more rarely in scarlet fever, and small-pox. When this symptom is combined with inflamed conjunctiva, and other symptoms are wanting, the disease is at once localized as a conjunctivitis. A special diagnostic is the watery eye in measles, and the bright, glistening eye in scarlet fever.

The gestures of an infant soon become an important feature. At a very early age the baby is attracted by the light and will follow it in its course. Soon it notices its fingers and things which are put into its hands, and while children are remarkably different as to their progress in such matters, yet stolid indifference to its surroundings should awaken inquiry as to its condition. An infant that has shown evidence of ability to notice, and then becomes utterly indifferent, is undoubtedly out of health. Thus the debility incident to the approach of chronic disease is marked by that languor which prevents the infant from holding up its head or sitting up unsupported.

In chronic hydrocephalus the head soon appears to be too heavy to be held upright, and the child assumes the recumbent position, or one in which the head is supported other than by its own muscular efforts.

Irregular or unnatural movements of the limbs indicate the approach of convulsion, or an attack of chorea, which, by the way, is of extremely rare occurrence in infants.

Paralysis may be diagnosed when the infant fails to move a limb in response to tickling or other irritation, or refuses to grasp an object with either hand, or where it constantly moves one leg or arm while the other remains motionless.

Earache should always be suspected when the infant pulls at its ear or constantly applies its hand to that part, or rubs the head against the pillow on that side. When, in addition, it screams at intervals, and applies its hand as above, there is undoubtedly neuralgia or otitis.

Picking or rubbing the nose has long been regarded as an indication of intestinal worms, but this symptom is also seen in nearly all forms of alimentary trouble.

As a precurser of convulsive attacks, we rarely fail to see a turning in of the thumbs and great toes. The thumbs are forcibly turned into the palms and grasped by the other fingers; and the toes are often seen as if endeavoring to imitate this movement.

The actions of the child while at the breast are especially to be noticed. When it takes the nipple eagerly draws a few times and lets go with a scream, we should examine for sore mouth or throat; for closure of the nostrils, as by coryza, which interferes with the breathing while sucking; or even for inability to obtain the milk because of closure of the tubes, or an absence of the supply. Frequently tongue-tie is accused of causing the action, but when an infant can protrude its tongue so as to extend beyond the vermillion border of the lip there is no want of ability to grasp the nipple.

The sleep should be calm. Very profound slumber may be due to an over-loaded stomach, rare with the very young, as they usually relieve this difficulty by ejecting the surplus; or to an over-

loaded brain, in which case other symptoms will aid in the diagnosis, as where coma, or an approach thereto, occurs during brain disease, etc.

In bowel affections, the sleep is short, much disturbed, and the child awakes in a peevish, unrefreshed condition.

The voice even in the very young is usually a positive aid in diagnosis. The cry of hunger is loud and continued until the wants are supplied. That of fright is repeated, breaking forth again and again after the efforts to quiet it, and the child shows a wild, perturbed look. That of passion is shrill and continuous, accompanied with gestures which cannot be mistaken, but point most positively to the cause and its remedy.

Acute pain is always shown by shrill screams which seem uncontrollable. Very piercing cries accompany acute brain affections; when intermittent they are usually caused by neuralgia, and particularly that of the ear. The cry of the infant, exhausted as by cholera infantum, is at times sharp, querulous, and then a low moaning as though its strength was gone. In pneumonia, pleurisy, or imperfect expansion of the lungs the cry is low, moaning. In hydrocephalus, we have the child awaking partially with a shrill, piercing note and falling back into a semi-comatose condition. A muffled or hoarse cry is heard where false membranes or effusion have formed in the throat. The peculiar bark of croup is readily recognized.

Temperature requires but little change to indicate disease. A degree below the normal accompanies exhaustion, sinking, the approach of death. Very high temperature is almost invariably one of the earliest symptoms of the eruptive fevers, particularly scarlatina. In this disease the hand, when held for a time, seems to become hotter and more dry. In all attacks of fever or inflammation, the temperature is high, and the higher its range, the more grave is the attack. In blood poisoning, as diphtheria, the temperature, high at the outset, soon sinks, and when below the normal a fatal result must be anticipated. The importance of the clinical thermometer in diseases of the young cannot be over-estimated.

But little reliance can be placed upon the respiration as a means of diagnosis in infants. At all times it is very irregular, the most marked changes occurring from the most trifling causes. It is remarkably slow in cerebral affections, occasionally giving the impression as though it were about to cease entirely. Or it may become intermittent. These symptoms occur in all diseases where there is exhaustion. In inflammation of the lungs and their appendages the respiration is accelerated, even panting, and is performed with more or less difficulty, as the result of the pain it causes. A most unfavorable symptom is that mode of respiration where the air is drawn in as with an effort, with great dilatation of the nostrils, wide opening of the mouth as though to afford room for the influx of the air. Yawning, when not seen in cases of great debility, is usually a precursor of an intermittent attack. In infants this symptom is often followed by a convulsion, which frequently recurs at a fixed hour, and thus marks an intermittent. Rigor is almost invariably substituted by convulsion in young children.

The cough affords additional information; in spasmodic croup it is loud, ringing, barking; in membranous croup it is harsh, muffled; painful, and with an effort at suppression in pneumonia, pleurisy, etc.; in spasms and long-continued in pertussis.

Sneezing occurring in rapid succession generally marks the commencement of measles.

The pulse is so readily influenced by slight causes that, like the respiration, it is of little value as a diagnostic sign. To make any estimate as to its rate, it should only be counted when the child is asleep. A rapid pulse with an increased temperature is an indication of fever, and this rarely fails to be marked by exacerbations, which usually occur in the afternoon. A very slow pulse is generally found in congestion or compression of the brain. With a tendency to coma, this is a very unfavorable symptom.

In examining the mouth, we may find the tongue and adjacent surfaces of a brilliant red. In the acute eruptive fevers, this is darker or brighter, according as we have measles or scarlet fever; the former the "raspberry tongue;" the latter the "strawberry tongue," from the resemblance in color and appearance to those fruits, due to the variety of redness and the elevation of the papillæ. This peculiar sign occurs at a very early period, several hours prior to the appearance of the cutaneous eruption. In scarlet fever, we have added a hot, dry breath. With such symptoms, we find general redness of the middle of the soft palate, which may extend to the anterior faucial pillars and the tonsils; rarely, as in smallpox, to the posterior wall of the pharynx alone. Another special sign in measles is that the posterior walls exceed the anterior in redness. To distinguish further in these two forms of fever, in scarlet fever we would have no swelling of these parts for the first few hours; while in measles the tonsils would be swollen as an early symptom. In all eruptive fevers, it is usual for the eruption to appear first on the roof of the mouth. In scarlet fever, this would be of a bright scarlet hue, without prominence, disappearing momentarily on pressure.

When the tongue is covered with a white matter resembling curds, the bowels are disordered. Here we find aphthæ, small ulcers, or even patches of ulceration, the result of improper food, indigestion, etc., all pointing to a debilitated condition of the bowels.

Swollen tongue, showing the indentations of the teeth, is always a symptom of bad omen.

The tongue dry and roughened, or dark, is a very unfavorable symptom. On the contrary, as moisture begins to show on the tongue, a favorable state of the child may be assumed.

Vomiting occurs so easily in infants, that it often may be regarded merely as a regurgitation of the surplus food. Hence, it does not usually attract so much notice in the early stages of disease. When the food comes up undigested some considerable time after it has been taken, it indicates want of tone in the digestive organs. Acid vomiting tells its own story.

Vomiting almost invariably occurs at the outset of scarlet fever; very rarely in the other acute exanthems, and does not recur, except in very grave cases. In affections of the brain, particularly after injuries, as by blows upon the head or concussion of this organ from any cause, vomiting is a constant symptom. It is an early concomitant of cholera infantum. It must also be remembered that vomiting is frequently the first sign that the breast milk is disagreeing with the child, because of pregnancy, or other condition improper for the continuance of nursing. The diagnosis is here made by the constant recurrence of this symptom without the advent of others, unless it be diarrhœa or the evidences of want of nourishment. Vomiting often ensues immediately when a child is nursed by an excited or exhausted mother. Here, too, coma or convulsions frequently follow.

Vomiting will occur in many infants that are deprived of the breast milk, or where an improper form of food is employed. With many children, it becomes a matter of great difficulty to find food that will agree with, or even be tolerated by the stomach.

The breath of an infant should be odorless. It becomes acid from an excess of acid in the food. All odors of the breath should attract attention, especially that of fœtor. This demands a careful examination for ulceration of the cheeks, throat, nose, etc. Occasionally it has been the earliest notice of the presence of diphtheritic throat.

The evacuations from the bowels should always be carefully inspected. Rarely can so much be learned by a description as by an inspection. Hence the nurse should reserve each diaper as removed, or several separately when convenient, and without the admixture of anything which would change the appearance of its contents. Sometimes a number of evacuations, alarming by their number, when combined will only amount to what should ordinarily be passed at once. Errors in diet are readily detected by the presence of particles of undigested food, seeds, skins, curd, and a variety of foreign bodies. Thus may be shown the presence of parasites, acidity, blood, mucus, the want of bile, and other disordered conditions. Blood mixed with mucus, febrile symptoms being present, would indicate dysentery. Pure blood would demand an examination for an injury, a foreign body, a polyp, and would be a symptom of purpura hæmorrhagica. Difficult passages, with blood or small discharges of blood, and the absence of the ordinary matters, would indicate constriction of the bowels, intussusception, etc. Dark green discharges or black tarry evacuations continuing for days after the birth of the child, show that the meconium has not been completely expelled.

Cold causes the passage of slimy mucus. The absence of one or more evacuations each day is important to notice, lest when other symptoms do not present a habit should thus be contracted. Colic is thus produced, inflammation of the bowels, or the straining to cause an evacuation may end in prolapsus ani, hernia, or other injury. In obstinate constipation the use of opiates may be suspected, and a most rigid inquiry should be made.

The urine if passed with pain or suppressed, demands an examination of the genitals to detect the presence of a stone in the urethra, an agglutination of the orifice of the prepuce, etc. The urine becoming scanty or disappearing after an acute attack, as scarlet fever, indicates disease of the kidney and dropsy.

A very frequent trouble is constantly overlooked, or regarded in a wrong light. This is incontinence of urine. Much injustice is caused by a want of knowledge as to the nature of this affection. Parents, supposing it due to natural uncleanliness, or to laziness, endeavor to correct it by severe punishment. Again, by many it is regarded as utterly incurable—a belief which is, unfortunately, shared by members of our profession and thus neglected, children are suffered to grow to years of maturity the victims of a disgusting malady. Even in these cases, in many instances, it has proved amenable to treatment.

Night terrors, that peculiar condition which causes even older children to spring screaming from the bed at night, or to scream and cover their heads with the clothing, should not be disregarded or treated as willfulness. It is a symptom imperatively demanding attention, and one which if its causes are not removed may eventuate in idiocy, or later in insanity.

Finally, a careful grouping of symptoms, the elimination of causes of errors, a thorough examination of the infant both during repose and when aroused; and, in the event of difficulty in making the diagnosis, with the clothing entirely removed will rarely fail to enable the practiced and observant physician to arrive at a positive conclusion as to the nature and cause of the affection, and give him a clue to the proper line of treatment.

IS ALCOHOL ESSENTIALLY A STIMULANT OR A PARALYZANT?

BY A. B. PALMER, M.D., LL.D., PROF. OF PATHOLOGY AND PRACTICE OF MEDICINE, IN THE COLLEGE OF MEDICINE AND SURGERY, UNIVERSITY OF MICHIGAN.

For many years past, from my own observations and experience, I have been convinced and have taught, that alcoholic drinks should not be spoken of as stimulants—as though their leading effect was the increase of power or activity in the system. That in certain conditions of disease, of shocks from injuries or suffering, and in some persons habituated to their use, they increase action temporarily, I have admitted and still admit; but that their effect in the physiological condition is to increase action, at least to any useful extent, even temporarily, in whatever quantity used, I have for a very long time doubted, and for several years past have very confidently denied. In the particular function where the most positive and ready test can be applied—that of muscular power—experiments have always shown that no quantity of alcohol, small or great, can increase that power in ordinary healthy conditions. One lifting all he is able cannot be made to lift more by taking alcohol. Experiments in France and elsewhere have invariably shown that when suf-

ficient alcohol was taken to produce an appreciable effect upon the muscles, their power has been *diminished* and not increased. It has been proven that this is the case not only with men, but with other animals. The horse, in the races when strength and fleetness are most exactly tested, cannot be made to run faster by any alcoholic dose; but on the contrary is weakened and rendered helpless by it.

These facts have long been known, though the proper conclusions from them have not always been drawn. Men who indulge in alcohol often fancy themselves stronger from its use. When so much weakened by it that they can scarcely stand, they often boast of their strength prompted by a deceptive feeling. When it is taken in smaller quantities, the same delusion is often produced. Those who habitually use alcohol, opium, or even tobacco, feel depressed when deprived of their accustomed narcotic, and are revived by returning to it; but no physiologist thinks of calling tobacco a "stimulant" because of this. All contend that its effect is essentially sedative—a diminisher of action. The writings of the late Dr. Anstie, of London, though he was not an advocate of complete abstinence from alcoholics, have done much to call attention to the precise action of these articles, and oppose the more common but erroneous view of their "stimulating" qualities.

The views of Dr. Richardson, the eminent sanitarian, physiologist and physician of London, on this subject are well known, but as years ago he followed his physiological views to their practical conclusions, and became an ardent advocate of total abstinence, a practice and a cause at that time, and still with some, unpopular in England, his opinions founded on scientific experiment and careful observations have not exerted the influence among scientific men to which they are entitled. More recently other scientific men, not connected with any special temperance movement, have expressed opinions on this subject which must have much influence in changing professional opinions and expressions, though long established custom of expression, belief or practice is slow to change.

Dr. Samuel Wilkes, of Guy's Hospital and Medical School, and one of the most acute and independent thinkers in the profession, in England and elsewhere, in an article in the *Cotemporary Review*, since published with other articles on the subject in a book, says:

"If most persons analyze their sensations after imbibing any alcoholic drink, they will soon discover that to describe the effect produced upon them by it as *stimulating, is a misnomer;* and that, consequently, the employment of the expression almost begs the whole question as to its operation and value; for there can be but little doubt that it is owing to this misapplication of the term *stimulant* to alcohol, with many conveying an idea of strength, that causes it to be so much recommended, and taken with so much satisfaction. If a person is low and a glass of wine produces a pleasurable effect, it is easy to regard it as a stimulant, and as having afforded some proportion of strength."

This, he thinks, is a mistake. He further says: "Its stimulating effects may be regarded as *nil* compared with those which may be styled its *sedative* or *paralyzing* ones. In a word, alcohol for all intents and purposes may be regarded as sedative or narcotic, rather than stimulant." He classes it with opium, Indian hemp and tobacco. It doubtless may sometimes temporarily soothe a worried, nervous system, but its secondary effects cause more worry, which worry it may again soothe. But by these repetitions the *alcoholic habit* and all it sad effects of chronic alcoholism follow.

But other means of testing this question of the stimulating or sedative effects of alcohol more precise and measurable, if not more satisfactory, are used. One of the latest series of experiments which has come under my observation was made by Sidney Ringer, M.D., author of an excellent work on materia medica and therapeutics, and professor of the practice of medicine in University College, London, together with Harrington Sainsbury, M. D., M. R. C. P., published in May number, 1883, of *The Practitioner*, a journal of therapeutics and public health, edited by T. Lauder Brunton, M.D., F. R. S., Fellow of the Royal College of Physicians, lecturer on materia medica and therapeutics in St. Bartholomew's Hospital School, etc.

The object of these experiments was to ascertain the strength of the different alcohols, and they were made upon the hearts of frogs. They were conducted in a strictly scientific manner, with the most approved instruments of precision now so frequently in use by original investigators in physiology.

All the alcohols were found to diminish the power and soon to stop the action of the heart; and the experiments were so managed in the light of previous experience as to have the complete arrest occur in about an hour; and the strength of the different alcohols was determined by the quantity required to produce the effect.

It was found, according to these experiments, that the action of all the alcohols was essentially the same in kind, differing only in degree. All arrested the heart in diastole—that is, stopped it in a state of relaxation or paralysis. *None of them increased the power of the heart at any time or in any degree of their action, but diminished it from the first, and until it was arrested.*

Of the methylic alcohol ($C H_4O$), the lightest and most powerful of the series, 205.5 minims were required to stop all action in the given time. Of the ethylic (C_2H_6O), the common alcohol, it required 114 minims. Of the next heavier, the propylic (C_3A_8O), 59.3 minims were required. Of the butylic ($C_4H_{10}O$), 17 minims were required; while of the amylic, the heaviest ($C_5H_{12}O$), only 6.6 minims were required to stop action.

These articles, properly diluted, were caused to pass through the heart, and were thus applied directly to its tissue, and may not represent the action of the articles correctly in all respects as applied to the general complex human system; but the experiments showed clearly the essential action of the agents, and demonstrated more positively their paralyzing, and

the absence of their stimulating effect, than their application to a complex organism, where paralysis of *inhibitory* or restraining functions may result in increase of certain actions.

These experiments, the authors declare, demonstrate more definitely than any others that have been instituted the *essential qualitative similarity* of the action of all the alcohols—their *sedative* effects—and a certain general *quantitive* relationship of one to another. It is scientifically interesting to the chemist and the physiologist to know that as the complexity of the molecular combination increases, the physiological activity, or poisonous effect, increases.

There are some small quantities of these heavier alcohols in various liquors, and certain combinations of them are said to constitute the fusil oil. The quantity compared with the 50 per cent., more or less, of common alcohol in spirits, is not often sufficient to modify the effect to any appreciable extent, especially as the qualitative effects of all the alcohols are so similar; but so far as they are present they increase the poisonous qualities of the liquors containing them.

The report of Drs. Ringer and Sainsbury closes with the remark, announcing the most important practical fact which these experiments confirm, viz., "that by their direct action on the cardiac tissue these drugs are clearly *paralyzant*, and that this appears to be the case from the outset, no stage of increased force of contraction preceding" (*Practitioner, May*, 1883, *p.* 350).

In another part of the report the authors say: "The position alcohol occupies is that of a *narcotic*, and it is probable that its action is very similar to that of ether. * * The sphygmographic experiments of Parkes and Wollowicz on man showed clearly the accelerating effect [of alcohol], but gave no distinct indication of increased arterial pressure." The arterial pressure is the evidence of the increased force. Increased frequency of pulsation is often the strongest evidence of diminished force or power, a very rapid, fluttering pulse usually occurring in extreme weakness.

All agree that the ultimate effect of any considerable amount of alcohol is depressing and paralyzing, and that in chronic alcoholism all the conditions indicate the failure of power; but yet many, even medical men, at least by their use of language, seem to think that in moderate quantities and as frequently used it is a stimulant, and some perhaps still regard its depressing and fatal effects as the result of overstimulation.

With the facts now presented before us, and others of a similar character so constantly accumulating, it cannot be long before our ideas and our language respecting alcoholic drinks will more nearly conform with the teachings of science.

A CASE OF TYPHLITIS, WITH AUTOPSY.

BY R. D. BARKER, M.D.

Luella A., American, aged twenty-one years. Was called to see her first at 2 P. M., July 5, 1883. Learned the following history of the case: Had been for some time of a costive habit—bowels frequently not moving for three or four days. Although not feeling very well, she went on an excursion to Spirit Lake, twenty miles distant by rail July 4. The forenoon of the day was damp and rainy, and upon arriving at the lake she was too ill to join her companions in the grove, but lay on the sofa in the sitting-room of the hotel most of the day. She complained to her friends of pain "across her," and vomited once or twice during the day.

On returning home in the evening, not having had movement of her bowels for two or three days, and the pain across her continuing, her mother gave her a dose of salts which she vomited. In the evening after her return she attended a dance, but was too ill to stay long; was in pain all night, the night of the 4th; the morning of the fifth, her bowels remaining costive, her mother gave her some senna tea which she vomited. I found her at 2 P. M., the 5th of July lying dressed on a sofa; had been crying, and seemed very low spirited, anxious and dispondent; very little febrile excitement; pulse 92; temperature normal; tongue slightly coated; her menses had appeared two weeks ago, and she was regular in her periods; she complained of severe pain in lower part of abdomen, extending to the pubes; excessively tender over the region of pain; very little tympanites; urine normal in quantity (so she said), but voided with pain; bowels not moved for three days. The pain being so low down and so severe, without the grave constitutional disturbance indicative of peritonitis, I diagnosed neuralgia of womb and appendices, and ordered copious vaginal injections of water as warm as could be borne; to apply hot applications over abdomen, and

℞ Fluid extract gelsemini.....gtt. ix
Fluid extract belladonna .....gtt. xvi
Simple Elix..... ʒvi
M. Sig. Teaspoonful every two hours.

Was called at 11 p. m.; medicine had given no relief; lies on the sofa, with knees drawn up, face flushed; pulse 140, and depressed; abdominal tenderness very marked, patient crying out in agony.

I question mother, and learn that she had not urinated to-day, and that they had misunderstood my orders, and had given her one quite large warm water enema into the rectum, which had produced two free liquid discharges. I pass catheter, but obtain no water; I introduce $^1/_2$ grain suppository of sulph morphia into rectum; I ask for counsel, and Dr. J. Croft is called. We wait half an hour for the effects of the suppository, and then find it necessary to give her by hypodermic injection $^1/_8$ grain sulph. morphia and $^1/_{120}$ grain atropia. This in the course of an hour gives her much relief, and we leave her with instructions to introduce the suppositories every two hours if necessary to relieve pain, and to continue hot fomentations.

Saw her again at 9 a. m.; now thoroughly under the influence of the morphia, but hardly free from pain; has had nausea since early morning, and has vomited several times, greenish, bilious fluid, containing no fœcal matter; pulse 150, and weak; body bathed in cold, clammy sweat; complains of intense

dryness and burning sensation in her throat and stomach; introduce catheter and withdraw 8 ounces urine; is to continue suppositories as may be necessary to keep her comfortable; continue hot fomentations, and to have ice water freely and to swallow little pieces of ice frequently.

6 P. M. Not quite so tender over abdomen; increased tympanites; still vomiting, not fœcal; seems to retain what is given while the stomach fills, and then ejects it; bowels not moved; perfectly rational; distress at stomach and throat continues; pass catheter and obtain 6 or 7 ounces of urine; ordered mustard over pit of stomach, otherwise continue treatment.

Called at 1 A. M. July 7; again in agony; pain and area of tenderness increased, now extending from pubes to navel; vomiting continues; prostration extreme; cold, clammy perspiration; pulse hardly numerable; I introduce catheter and obtain 8 ounces of urine, and introduce suppository, and again call Dr. Croft. When he comes she seems much easier, and we conclude the alarming symptoms to be the result of the distension of the bladder. Dr. Croft, who has from the first visit been inclined to the belief that the disease was intussusception of the bowels, suggested the introduction of a long flexible rectal tube, and the flooding of the bowels with tepid water. Going to his office for his tube, when he returned she was so much easier we postponed the operation.

9 A. M. Has slept some since previous visit; is more comfortable; vomits, but less often; not as much abdominal tenderness, and less tympanites; pulse 120, fuller; withdraw 4 ounces urine. As she now seems almost free from pain, and believing the discomfort of the throat and stomach is caused by the morphine, I discontinue the suppositories.

6 P. M. Vomiting ceased; free from pain; pulse 120; temperature 98°; catheter passed, and 6 ounces urine obtained; is now taking no medicine; beef tea, wine and milk, as much as stomach will tolerate; called at midnight and passed catheter—6 ounces urine.

July 8—9 A. M. Has slept considerable during the night; more comfortable, perfectly rational, and much more hopeful; pulse 128, temperature 98½; has passed her urine once since midnight unassisted.

6 P. M. Seems to be slowly improving; stomach retains considerable liquid food; is now taking no anodynes; tenderness and tympanites disappearing; as she has had no movement of the bowels since the first day of the attack, and she complains of desire for the stool, I direct the nurse to inject into the bowels slowly and carefully one half pint of warm water, discontinuing the injection the moment it gives her pain; half an hour after was called in great haste, and found patient suffering greatly; her mother informed me that they commenced to give the enema as ordered, but had passed up not more than two or three tablespoonfuls before she commenced to complain of its giving her pain.

I now called Dr. L. W. Warren in council, and expressed to him my positive conviction that there was a perforation of the bowels somewhere in the region of the descending colon, and that the injected liquid passed directly into the peritoneal cavity. In no other way could I account for the sudden increase of all inflammatory symptoms every time the syringe was used. Dr. Warren advised the resumption of the hot fomentations and the morphia suppositories, and also the application of pure chloroform upon flannel to the region of abdominal pain and tenderness.

From this relapse she never recovered. All the inflammatory symptoms returned in an aggravated form, she became delirious and rapidly sank, and died July 11th, at 11 A. M.

Autopsy five hours after death.

Upon opening into the abdominal cavity I find it filled with a yellowish milky fluid, evidently the liquid food she had been taking for several days.

There was diffused inflammation of the peritonæum and bowels, much more marked on right side in the vicinity of the descending colon and appendix vermiformis, and a creamy, tenacious deposit on the coat of the bowels, evidently of inflammatory origin, and a slight deposit of pus in the immediate vicinity of the appendix.

Examining carefully the appendix vermiformis, I find a perforation, and just at point of perforation, but within the part, a hard substance about twice the size and of the shape of a kernel of wheat, which proves to be hardened fœcal matter. Upon pressure upon the bowels, its contents would be expelled through the rupture.

The remarkable features of this case are, the length of time she survived the perforation, and entrance of the fœcal matter into the abdominal cavity (as I am confident, from a careful study of the case, that the first injection given into bowel, when ordered for the vagina, passed into the abdominal cavity), and the seeming improvement of the patient after perforation.

WORTHINGTON, Minn., Aug. 31, 1883.

AT the last meeting of the New Brunswick Medical Society at St. Johns, the following members were elected: Dr. Vail, President; Dr. Walker, 1st Vice-President; Dr. Patterson, 2nd Vice-President; Dr. G. M. Duncan, General Secretary; Dr. Coleman, Corresponding Secretary; Dr. Nevers, Treasurer; Drs. Daniel, Allison and Berryman, Trustees. The meeting then adjourned to meet in St. Johns, on the 3rd Tuesday in July, 1884.

PROFESSOR WALDEYER, of Strasburg, succeeds Professor Reichert in the chair of Anatomy in the University of Berlin. Dr. H. Chian has been made Professor of Pathological Anatomy in the University of Prague.

Gaillard's Medical Journal has returned to its old monthly form. The change was made at the request of many subscribers. It is now the only monthly medical journal published in New York.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, SEPTEMBER 8, 1883.

EXPLANATION.—We have allowed the papers furnished to the late Chairman of the Section on State Medicine to occupy in this number the space usually given to "Medical Progress." The latter will be resumed as usual in our next number.

PROGRESS OF STATE MEDICINE AND STATE BOARDS OF HEALTH.—The Section on State Medicine of the American Medical Association embraces a standing committee of one from each State, whose duty it is to report the progress and condition of State Medicine in their respective States. Previous to the annual meeting in Cleveland, June, 1883, the officers of that Section addressed to each member of that committee the following questions:

1. Have you a State Board of Health or its equivalent?

2 What changes, if any, have been made during the year in the organization, powers and duties of such Board?

3. The number and character of its auxiliary and local organizations, if any?

4. The changes made, if any, in your laws designed to arrest the spread of communicable diseases, and what diseases are held, by statute, to be communicable and dangerous to public health?

5. What, if any, new laws or amendments of old ones, providing for the collection, tabulation and publication of vital statistics?

One of the questions to be presented for the consideration of the Section of State Medicine, at the meeting in Cleveland, June 5, prox., will be—

"How can medical men best promote sanitary progress? Do the advanced ideas and radical measures of medical men and medical organizations, on sanitary questions, retard State or municipal sanitation?

Any facts, bearing on this question, which your report may include, will be welcomed.

I have delayed this usual call, for these annual reports, in order to get the latest action of our State Legislatures. Very respectfully,

FOSTER PRATT, M.D., Chairman,
Kalamazoo, Mich.

THOS. L. NEAL, M.D., Secretary,
Dayton, Ohio.

Responses were made to these questions by the representatives of the following States and of the Medical Corps of the Navy: Arkansas, Colorado, Indiana, Illinois, Kentucky, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, North Carolina, Ohio, Rhode Island, Tennessee, Virginia, and Wisconsin.

Several of these responses consist only of printed reports of Boards of Health or brief references to such documents, while a few of them give a fair account of the progress of official action in the efforts to improve the sanitary condition of the people and in some cases to regulate the practice of medicine. The progress of the work in Michigan was fully explained in the address of the Chairman of the Section, which was published in THE JOURNAL for Aug. 18, and a full account of the practical working of the sanitary and medical legislation in Illinois is given in the report of Dr. H. A. Johnson, which, by request, was read in full before the section, and therefore we feel justified in giving it a place here. We shall also gives nearly a or full copy of the report by the representative of the navy. The report of Dr. H. A. Johnson, in regard to the "Working of the Illinois State Board of Health" is as follows:

This Board is no longer an experiment. With the close of this month will end the sixth year of its existence. During these six years it has at least met the expectations of those who were most active in promoting its formation.

With many limitations and imperfections in the constituting act, it has accomplished much of permanent value both for the profession and for the public. It is doubtful if such results could have been accomplished in any other way or by any other agency, at this stage in the development of public opinion.

At the date of the foundation of this Board, July 1, 1877, the profession in Illinois embraced 7,400 individuals, and was composed, in round numbers, of 3,600 graduates in medicine, and 3,800 non-graduates, itinerants and nondescripts, who combined various other vocations with that of "doctor"; for example, there were, according to the records in the office of the Board, 171 ministers who were upon occasion healers of bodily ailments, and who, if not entitled to write "D.D." after their names, had no hesitation in writing "Dr." before them, with quite

as little warrant for the latter by virtue of any regular course of medical study, as for the former by reason of their theological education.

These, almost without exception, belonged to some of the irregular schools—Thompsonians, magnetic healers, "faith doctors," etc., being found among them.

But four or five of this class now remain in the State as medical practitioners, and the continued existence of these is due to what is known as the ten years prior practice clause of the Medical Practice Act, concerning which a word or two may be said in another connection.

Dr. Darrah, President of the Illinois State Medical Society, in a recent address, has analyzed the composition of the 3,800 non-graduates of 1877, with the following results:

Applicants to the State Board for certificates under the prior practice clause,	1,956
Non-exempt non-graduates whose names have disappeared from the County Clerks' registers	966
Non-graduates examined for certificates	618
Making a total of	3,542

He accounts for the remaining 260, concerning whom there is no documentary evidence or official record, as comprising a number of unqualified non-residents, whose practice extended into Illinois, and those who voluntarily left the State during the first five months after the passage of the act, and without attempting to comply with its requirements.

In addition to its dealings with the original 7,400, the Board had received, up to January 1st of the present year, applications from 3,780 new graduates and migrating physicians, representing an average increment of 630 per annum, and making a total of 11,180 individuals coming within the purview of the Medical Practice Act, except as exempted by the prior practice clause.

From the official register in the Secretary's office, and the returns from the County Clerks' offices—in which every physician, without exception, is compelled to record his name and address—it is found that there were on January 1st, 1883, a total of 6,251 registered practitioners in the State, being a gross reduction of 4,829 from the aggregate of the six years, and an actual reduction of 1,149 from the number in practice July 1st, 1877.

If from 6,251 registered physicians there be deducted those not actively engaged in practice, but who still preserve their legal status as practitioners, the proportion of population to each practicing physician will be found to have risen, from 398 to 1 in 1877, to 620 to 1 in 1883. The gain, however, is not to the profession solely, nor even in the larger proportion.

In 1877 there were 73 itinerants traveling through this and adjoining States, who swindled the people of Illinois out of an aggregate of over $200,000 each year. In 1883 there are just seven of these left, shielded by the ten-years' practice clause. There is thus saved over $180,000 a year to a class of people who can least afford to lose such a sum. Even this affords an insufficient measure of the gain to the community which results from the higher standard of professional attainments which now obtains through the operation of the Medical Practice Act. Whereas, in 1877 the non-graduates outnumbered the graduates. At the beginning of this year there were 5,559 graduates and only 692 non-graduates. How this change has been effected is shown, to some extent, in the following passage from the report read at the April (1883) meeting of the Board:

"Among the certificates issued during the past month a considerable number were to practitioners exempt from the Medical Practice Act, by reason of length of practice in the State, but who have recently graduated from the reputable medical colleges; and also to others holding certificates based on examinations, and who have pursued the same course. It is gratifying to be able to record this result of the recommendation of the Board, whose policy it has uniformly been to urge non-graduate candidates for its certificates to complete the regular curriculum of study, and obtain the diploma of a college in good standing."

There has been in some quarters criticism of the composition of the Board. The following facts seem to be a sufficient answer to such criticism as far as it relates to a mixed Board.

During the first eighteen months certificates were issued to 3,646 regular practitioners and to 1,304 irregulars, including homœopaths, eclectics, and those of no specified school. The last official register shows 4,362 regular and 1,234 irregulars, a gain of nearly 20 per cent. to the former and 6 per cent. from the latter.

The Board is required by the law to accord examinations to non-graduate applicants for certificates, and has examined in all 618. Of these it has passed 220, but with the improvement in the status of the profession it has gradually increased its standard also, until, at the last annual examination, of eighteen applicants five withdrew before attempting to answer the questions, and the remaining thirteen were rejected. As Dr. Darrah remarks, "The schedule of the questions propounded and the results of these examinations are conclusive that it is not through the action of the Illinois State Board of Health that the ranks of the profession will be swelled by incompetent practitioners."

By such measures as these, and by it action in reference to the recognition of Medical Colleges, the Board is exerting an influence upon the profession and upon medical education which is by no means confined to Illinois. It has been called upon to determine the standing of eighty-three of the one hundred and ten existing medical schools in the United States and Canada. It has rejected either provisionally or unconditionally, the diplomas of twenty-eight different institutions, thirteen of which are now extinct. Henceforward, thé diploma of any school which does not conform to the Board's schedule of minimum requirements will be valueless as entitling its possessor to practice in Illinois. This schedule has been framed after a careful study of the usages and methods of the various schools, and its adoption seems to be another illustration of the prudence,

moderation and wisdom, combined with steadfast effort for improvement which have thus far characterized the official actions of the Board under the Medical Practice Act.

That clause in the act which exempts from its operation those who had been in practice ten years prior to its passage, has been the source of much trouble and has incurred for the Board not a little unjust criticism. Under its shelter the few remaining advertising quacks and itinerants still prolong their vicious careers. But time is correcting this, with other evils. As these die out no new crop is possible, and a few years more will see the last of them.

As a sanitary organization, the Illinois State Board of Health has accomplished a very creditable amount of practical sanitary work. During the recent small-pox epidemic it secured, directly, through an official order, the vaccination of over 300,000 public school children, and indirectly, by means of circulars pamphlets and other methods, the vaccination or re-vaccination of over one and one-half millions of others, both children and adults. Its rules and regulations for the suppression of small-pox were furnished to over two hundred infected localities in the State during the epidemic, and in every instance where they were carried out with any degree of thoroughness the disease was confined to the first cases or families attacked.

It has prepared and published a series of "Preventable-Disease Circulars," treating of small-pox, scarlet fever, diphtheria, typhoid fever, etc., which are admirable in matter and manner.

Among the matters which have engaged its attention, outside of the usual routine, may be mentioned:

The promotion of the burial permit system; the removal and transportation of corpses; the sanitary care and policing of railway stations and grounds; the sanitation of railway and steamboat travel; the supply of pure vaccine virus; the formation of local health organizations; remedies for river and canal pollution; the conservancy of water-supplies; inquiries into the causes of excessive death-rates in certain localities, with suggestions for relief; investigations concerning the existence of glanders, trichiniasis, diphtheria, scarlet and typhoid fevers, and other contagious or preventable diseases; the location and sanitary control of graveyards, slaughtering, packing and rendering establishments, and of public dumping-grounds; food adulterations, including swill-fed and glucose-refuse milk; the effects of parks and of vegetation upon climate; of subsoil drainage and sewerage upon health and the death-rate; the sanitation of small cities and towns, etc.

In all of the above it has done an amount of work and secured results entirely out of proportion to its resources; for, like all such organizations in this country, the appropriations for its support have been inadequate; and it has been only by the personal sacrifices of its members, and the enthusiasm and devotion of its executive officer, that such results have been attained.

In its work the Board has promptly utilized all available agencies; and alike in the protection of our southern extremity from yellow fever, through its connection and influence with the Sanitary Council of the Mississippi Valley, as in guarding our eastern boundary from imported small-pox, through the emigrant inspection system of the National Board of Health, it has demonstrated the feasibility of a public health service in entire consonance with any or all political theories, whether of "States Rights" or of "National Sovereignty." Possibly this was to be expected of a State whose coat of arms bears both those mottoes. It is none the less gratifying, however, to discover an organization capable of defining State medicine in a cosmopolitan spirit, and thence to avail itself as quickly of the resources of the Federal treasury and national authority on the one hand, as of the moral and material support of a volunteer co-operation on the other.

The following report of Albert L. Gihon, A.M., M. D., representing the U. S. Naval Medical Staff, will be read with interest:

WASHINGTON, D. C., June 1, 1883.

FOSTER PRATT, M.D., *Chairman, Section in State Medicine American Medical Association,*

Sir:—In response to the questions propounded in your circular-letter of May 1st, addressed to the elected members of the Section in State Medicine, I beg to state:

FIRST. That the officers of the medical corps of the Navy are distinctively *health officers*. It is impressed upon them, when they enter the service, that their most important function is the preservation of the health of the personnel of the Navy as a necessary factor of its efficiency, and the regulations for the government of the Navy expressly impose upon them the duty of recommending, whatever in their opinion, may be conducive to this end.

Annual sanitary reports are required to be made to the Bureau of Medicine and Surgery under the following heads:

(*a*) General hygiene, which shall include a report of the sanitary condition of the ship or station, accounts of epidemics or important cases of diséase which have not previously been reported, together with such information or suggestions as may tend to the prevention of disease, or have an influence in the preservation of the health of the personnel of the ship or station.

(*b*) Topography; to embrace a description of the ports visited during each year, with such information as may be obtainable.

1. General physical characteristics, relating to situation, soil, drainage, streets and buildings, etc.
2. Population—number and character of, customs, and habits of the people.
3. Climatology.
4. Food supply.
5. Water supply.
6. Prevailing diseases and statistics of diseases and mortality.
7. Establishments for the care of the sick.
8. Education, general and professional.
9. General remarks, including such recommendations or cautions as may be of service to other vessels visiting the port.

During the prevalence of epidemic or contagious diseases on foreign stations, especially in ports of the Gulf of Mexico, the West Indies, and the South Atlantic Station, medical officers shall forward to the Bureau, in accordance with the circular of the Secretary of the Navy of August 18, 1879, all reliable information relating thereto which they may be able to procure, cousulting for this purpose the consular and health officers of the port affected.

In addition, the *Board of Inspection and Survey* of the Navy, through the medical officer belonging to it, is required to inspect and report upon the sanitary condition of every vessel going into and coming out of commission, the report embracing the following points: The average cubic air-space per occupant of every apartment; the ventilation, dryness and illumination of the officers' state-rooms, steerages, forecastle, berths, decks, hospital and prisons; the ventilation, dryness and cleanliness of pantries, store-rooms, holds and bilges; the supply of fresh water and its probability; the abundance of the food ration and its preparation; the sufficiency and cleanliness of clothing and bedding; with the special provisions for the care and transportation of the sick and wounded, and for the emergency of the outbreak of epidemic and contagious dieeases.

2d. None.

3d. None.

4th. There are no specific regulations for the arrest of the spread of communicable diseases, this being left to the discretion of the medical officer of the ship or staton acting singly, or of a board of medical officers in cases of unusual gravity. Small-pox, measles, and other exanthemata are isolated on the spar-deck. Upon the appearance of yellow fever on board ship the effort is at once made to get the vessel away from the infected port, and to remove both sick and well out of her, the belief being general among the medical officers of the navy that the only safety for the well is to get them out of the ship; that the sick can be removed, provided the bedding and clothing are not carried with them, with entire impunity to those among whom they are received; and, with respect to the vessel itself, that a yellow-fever ship is always a foul ship; that foul ships, while often generating by their filth other epidemic diseases, have never developed yellow fever *de novo;* but that such a ship will become infected by communicating with a place where yellow fever is prevailing, and will disseminate it if removed to a locality where the sanitary conditions are bad and its contents—freight, food, baggage, or clothing—are taken out of her, while a clean ship may visit a fever port and, by vigorously abstaining from communication with the place, escape the disease. Absolute non-intercourse with sources of infection, which in the case of this disease are always believed to be exotic as regards this country, an effective quarantine and the use of dry superheated steam and sulphurous acid gas as germicides, are the means relied upon for the arrest of the spread of this and other communicable diseases. As a further measure in this direction, on stations where the compulsory inspection of public women is in vogue, no men are allowed to visit the shore who are not known to the medical officers to be themselves free from venereal complaints.

5th. The Surgeon-General of the Navy has recently extended the scope of the quarterly report of classified diseases occurring in the service, exacted from all medical officers who are heads of the medical department of every vessel, station and hospital by requiring statistical returns of etiology as far as this can be definitely established, showing the causative relations of inheritance, predisposition or antecedent illness, of climatic influences, local insanitary conditions, and of venereal infection, as well as the distribution of disease among the several grades of officers and men for each decennial period of age.

In this connection, I may be permitted to repeat what I insisted upon in my address as Chairman of this Section at its last meeting—that mere mortality returns are less important elements of vital statistics than detailed statements of the causes, character and number of disease occurrences in a community. The enumeration of births, marriages and deaths is an insufficient criterion of sanitary condition, for with the progress of medical science the deaths became less exact exponents of prevailing disease. The actual number of cases, their probable causes, and the number of days of duration of each, are the proper measures of the hygenic and economic disturbances of a population. Returns of this character are now tabulated and published annually in the report of the Surgeon-General of the Navy. Another class of exhibits, which may be consulted at length in the same reports, might profitably be exacted of every medical examiner for life insurance, as they indicate the amount of health impairment, which does not come under the observation of the practitioner—that is, the physical disabilities of individuals, who, considering themselves well or affecting to be so, seek admission into the military service or solicit insurance policies or membership in beneficiary societies. The report just published shows that of 6,792 persons examined for the naval service during the year 1881, there were 1,967, or 29 per cent., or one among every three or four individuals registered as physically disqualified, the principal disabilities being—

Defects of Vision—436, or 25 per cent. of those rejected, or 1 in 4 to 5 applicants.

Defective Development—411, or 21 per cent. of those rejected, or 1 in 4 to 5 applicants.

Diseases of Digestive System—322, or 16 per cent. of those rejected, or 1 in 6 applicants.

Diseases of Heart and Circulation—314, or 16 per cent. of those rejected, or 1 in 6 applicants.

Venereal Affections—205, or 10 per cent. of those rejected, or 1 in 9 applicants.

With respect to the inquiry, "*How can medical men best promote sanitary progress?*" undoubtedly the first important step, before success can be hoped from restrictive legislation, is the education of the masses in the essential facts of sanitary science. Ignorance of the danger of the violation of the laws of health induces antagonism where a comprehension of the evil sought to be combatted would have met with acquiescence. Compulsory vaccination is resisted because it is compulsory; the Contagious Diseases Acts are antagonized only on quasi-sentimental grounds; the social evil experiment of St. Louis was

assailed because the community did not comprehend the magnitude of the harm done by the diseases it disseminates when uncontrolled. People fear draughts, but are not afraid of foul air, and so close windows and ventilators to escape the former. When they are made to understand that foul air and moisture are the enemies of mankind, they will shun the unventilated church and theater; when they are taught that diphtheria and scarlet fever and typhoid are preventable diseases, they will welcome the ordinances which punish the dishonest plumber and the careless householder and establish restrictive quarantines; when they realize that venereal disease may and does enter the purest homes by a thousand unsuspected channels, they will join hands with the legislator, who would make its communication a social infamy and a punishable offense against the law; when they learn that the average of human life has been prolonged one-seventh in the course of a single generation by improved hygiene, they will give heed to the advice that will keep them well, rather than depend upon that which is to restore the health that has been needlessly wasted. Impracticable sanitarians, who find a sting in every sweet that human tastes crave and enjoy, encourage the resolve to brave the risk for the sake of the pleasure. The restriction of the dietary to a few plain, unpalatable simples, the uncompromising warfare against tobacco and alcohol in every shape, the unqualified denunciation of every form of relaxation and amusement, even to the latest novelty of bicycle riding, are instances of sanitary reform retarded by injudicious radicalism. Medical men can best promote sanitary progress by aiding in the dissemination of information as to the actual prevalence of disease, the established facts of etiology and prophylaxis, and the inevitable consequences of their disregard, and this can best be accomplished through sanitary associations and publications, especially in the secular press, which has come in this country to be for the citizen what the school is for the child, with the advantage for the adult that the lessons are taught in a more rational, agreeable and effective manner.

Progress of Yellow Fever.—Advices from Pensacola to September 4th represent the city as continuing healthy and free from the fever. Three new cases had been reported at the navy yard, and one death. The death was that of a Dr. Bosso, who is represented by the newspapers as having had a specific for the cure of yellow fever. But it seems to have failed in his own case. It is claimed that several cases of the fever have occurred in the village adjoining the naval reservation. News comes from San Francisco that cases of yellow fever have occurred at Mazatlan, in Mexico.

Small Pox.—This disease still lingers in New Orleans, there having been nineteen deaths from it reported during the week ending the 18th of August.

Since our last issue we have observed nothing new concerning the progress of the cholera in Egypt, except that it has so far subsided that the quarantine restrictions have been removed along the Suez Canal and commerce restored.

DOMESTIC CORRESPONDENCE.

THE NAVAL LABORATORY.—ERROR CORRECTED.

1932 Chestnut St.,
Philadelphia, Aug. 29, 1883.

Editor of the Journal of the American Medical Association:

In No. 6, August 18, p. 192, of The Journal of the American Medical Association, received the 27th, is a brief obituary notice of Dr. Benjamin Franklin Bache.

It is stated in it that "he established the Naval Laboratory," etc. This is an error. It is of little significance in itself, but it is interesting in connection with historical accuracy and the immense importance of truth, which we all profess to respect.

The Naval Laboratory at the Naval Hospital, Brooklyn, N. Y., was started by myself in the autumn of 1845, five years before Dr. Bache was connected with it. Its origin is due to a small circumstance. At that time medical supplies of all kinds were furnished to the navy on a contract awarded yearly to the lowest bidder. Late in a day of October or November, just before leaving the hospital to visit New York, I observed, while giving some instructions to the steward in the dispensary, that the laudanum bottle was very nearly if not entirely empty. Thinking it would be imprudent to permit a hospital containing from seventy to eighty patients to be without laudanum during the night, I put into my pocket a pint bottle and called at the shop of the contractor, a leading wholesale druggist of New York. I requested a clerk to fill my bottle. The young man innocently asked, "Do you get the shilling or two shilling laudanum?"

That simple question was the foundation of the Naval Laboratory. An examination of the preparations in the dispensary the next day satisfied me that the contractor furnished many other one-shilling and two-shilling articles besides laudanum. On my representation of the circumstances to the Chief of the Bureau of Medicine and Surgery, Dr. Thomas Harris, I was authorized to make all preparations used in the hospital. After an experience of a few months, I proposed to Dr. Harris to enlarge our operations so far as to be able to supply the dispensary of the navy yard and all vessels fitting at New York. I argued that the plan could be realized without augmenting our working force, and that we would be confident that all preparations issued from the hospital were pure and of the strength prescribed by the Pharmacopeia of the United States. The proposition was adopted, and was found in a short time to work so satisfactorily that all officinal preparations were made in the laboratory of the hospital for the whole navy.

After four years' service, I was relieved from the charge of the hospital by Dr. Waters Smith, Sept. 1, 1847. A board of medical officers, after examination, reported substantially that the hospital and laboratory were in a satisfactory condition. I enclose a copy of an official letter, in reference to the subject, addressed to me by Dr. Harris.

Dr. Smith continued the work of the laboratory, adding from time to time to its apparatus and facilities until his death, in August, 1850. In September of the same year I was again placed temporarily in charge of the establishment, hospital and laboratory, and held it until some time in December, when I was relieved by Dr. Bache, immediately after his return from a cruise on the coast of Brazil, where he had served as surgeon of the fleet.

Dr. Bache took great pains to improve and extend the laboratory department. Under his skillful management it became an admirable pharmaceutical manufactory. When the term of his service as surgeon of the hospital had expired, 1853, he was relieved from the care of the hospital and appointed Director of the Naval Laboratory, which was then made a station or post distinct from the hospital. He was placed on the "retired list" Feb. 1, 1863, but was still continued Director of the Naval Laboratory until September, 1871. During the rebellion he performed the duties of the office, which were arduous and important, to the entire satisfaction of the Government, and therefore with credit to himself.

This brief account of the origin and growth of the Naval Laboratory is, I think, enough to show that the statement that Dr. Bache "established" it is not quite correct.

There are other inaccuracies in the notice. If the official record is reliable, Dr. Bache was born February 1, and not February 7, 1801, as stated. The Navy Register does not show that he was at any time "on furlough." He was a resident in Gambier, Ohio, in 1841, "on leave," and I conjecture that it was about this time that he was professor of natural philosophy and chemistry in Kenyon College. Dr. Bache, I believe, never claimed to teach "the natural sciences," or any department of natural history.

We have in the navy, Francis M. Gunnell, Medical Director, and Robert H. Gunnell, Passed Assistant Engineer, but none named J. N. Gunnell, who is credited with forwarding the notice. This may be an erratum of the printer.

If the testimony herein submitted conveys sufficient evidence that the error indicated is manifest, I request you to correct it in any manner that may seem to you proper, and oblige yours,

Very truly,
W. S. W. RUSCHENBERGER.

THERAPEUTICS OF TYPHOID FEVER.

A recent editorial in "*The Medical Record*" (August 11th) calls attention to the investigations of Klebs and Eberth into the pathology of typhoid fever, together with the announcement that Prof. Henri Desplats, of Lille, had made the discovery that *salicylate of bismuth* is "the great desideratum" in the treatment of that disease, and concludes as follows: "In short, the perusal of this article seems to justify the hope that in the *salicylate* of bismuth we have a new medicament of great antiseptic value."

As it is by experience alone that the truth or falsity of a theory can be demonstrated, it is to be hoped that some one having the time and opportunity will prove whether Prof. Desplat's assertions are true or not.

In this connection, however, it is desired to call the earnest attention of the profession to the claims of *sulphurous acid* in the treatment of typhoid fever. A course of experimentation with the drug, extending through a period of more than twenty years, in almost every variety of zymotic disease, convinces the writer that its power over and adaptability to the medication of this variety of ailment has not been recognized and appreciated by the majority of the profession.

That it is capable of modifying both the violence and duration of typhoid fever, has been demonstrated to my own and my patients' satisfaction so many times that without the drug I should approach the treatment of a case of that disease with considerable trepidation. Given in moderate doses during the period of dry skin and parched brown tongue, its effects are often magical.

This disease, however, is but one of the many in which *sulphurous* acid may be used both as a remedy and a prophylactic. *The acute infectious diseases are all modified, aborted, or wholly prevented by its use.*

While recognizing the latitude of the above declaration, the facts and proofs of its truth, in the writer's possession, fully justify it.

So fully is the writer persuaded of the immense value of this drug, that it is his intention, if opportunity shall permit, to submit to the profession the results of twenty years of critical study of this drug.

Most of the experiments have been made with bi-sulphite of soda, though in a few cases a solution of sulphurous acid diluted with glycerine has been employed, giving equally as good results, but not as well tolerated by the patient.

Let those who wish to demonstrate its utility use a saturated solution of bi-sulphite of soda in water, giving one teaspoonful every two or three hours until the system is brought fully under the influence of the drug; afterward one dose every six hours will be sufficient to maintain its effect.

D. A. SHEFFIELD, M.D.

APPLE RIVER, ILL., Aug. 30, 1883.

REVIEWS.

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY FOR THE YEAR 1883. No. III. Vol. VIII.

This is a volume, or rather part of a volume, of 138 pages, on good paper and fair type. It contains the record of proceedings and the reports and papers presented at the annual meeting of the Society in Kalamazoo, May 9 and 10, 1883. After the record

of proceedings and the President's address, we find the following papers: "Sanguineous Tumors of the Scalp," by Dr. Wm. Brodie, of Detroit; "Clinical Notes on errors of Refraction," by Dr. C. J. Lundy, of Detroit; "Foreign Bodies in the Ear," by Dr. A. R. Smart; "Ulcers of the Cornea," by Eugene Smith; "Urethral Inflammation," by Dr. H. J. Reynolds; "Epidemic-Waves of Diphtheria," by Henry B. Baker; "Water—Its Relations to Health and Disease," by Dr. J. A. Post, and a poem "Pro Bono Professionis," by Dr. E. B. Ward. Perhaps the most important of these papers is that on "Water—Its Relations to Health and Disease." The paper contains a fair representation of the importance of attention on the part of every family and community, to the quality of the water used; points to the principal sources and ingredients of impurity, and the means of their detection, and closes with the following paragraphs:

"*To Disinfect Impure Water.* Boil thoroughly, or use a weak solution of permanganate of potash. It is contended by some that recently calcined charcoal, well pulverized, is the only substance which can, with impunity, be mingled with water in excess without communicating taste or hurtful properties. It is usually placed in layers between clean gravel through which the water is filtered. The charcoal should be renewed occasionally, as it becomes inert when saturated. If water be boiled to deprive it of infectious germs or bad odor, it should be exposed to the air for a time to absorb again a portion of oxygen and carbonic acid. It is said that a very small per cent. of salicylic acid will keep water in casks or tanks fresh and sweet for weeks.

"*Conclusions.*—If Nessler's solution gives a coloration but no precipitate, and if nitrates, nitrites, and chlorides are absent, the water is soft and fit for use. The ammonia is probably of vegetable origin.

"If Nessler's solution gives a large precipitate without color, chlorides are in excess, and nitrates, nitrites, and organic matter absent, the water is hard but fit for use.

"If ammonia, nitrites, and chlorides are present, the water is unfit for use.

"If nitrates and nitrites are present, and ammonia and chlorides absent, the water is fit for use.

"If nitrites and chlorides are both present, in excess, the water should be regarded as very suspicious, even though ammonia be absent.

"If chlorine be present to the extent of two or three grains per gallon, or upwards, the water is unfit for use."

We congratulate the Michigan State Medical Society on the early appearance of its Transactions. There are no good reasons why the Transactions of any State Medical Society should not appear in print in three months after the annual meeting, instead of six or nine, as is more commonly the case.

At Hoosick Falls, N. Y., Dr. F. R. Hudson was shot and seriously wounded last week by a man whose wife he had declined to visit.

SOCIETY PROCEEDINGS.

REPORT OF PUBLICATION COMMITTEE OF SECTION ON OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY. SESSION 1883.

The committee respectfully report, that they consider,, after careful examination of the rules laid down by the Association, in the plan of organization (page 630, vol. xxxiii, of transactions) the following papers as proper for publication in the transtions, inasmuch as said papers contain, either new facts, well devised experimental research, or complete review of subject-matter with deductions:

1. Tonsillotomy by Ecrasement, by W. C. Jarvis, N. Y.
2. Action of Nitrate of Silver on the Mucous Membrane of the Throat and Nose, by Carl Seiler, of Philadelphia, Pa.
3. A case Illustrating the Segmental Feature of Gloucoma, by Dr. H. Culbertson, of Ohio.
4. Questions on the Ætiology of Some Forms of Lenticular Opacity.
5. Nasal Disease a Frequent Cause of Asthma, by Dr. J. O. Roe, of Rochester.
6. Is Abscision a Proper Operation? Chisholm.
8. A form of Spectacles in lieu of Nose Pieces.
8. Report of cases, by Cornwell, Columbus, Ohio.

All papers read by title onlv, in the absence of of the author, the committee recommend to be referred back to the author, as no discussion could be had on them.

All other papers not mentioned in this report, and read before the section, the committee, in accordance with the rules quoted above, recommend to be referred back to the author, with the recommendation to publish them in any journal desired by the author, with the privilege of heading them, "Read before the Section on Ophthalmology, Otology and Laryngology, of the American Medical Association, Session 1883."

E. Williams,
L. Connor,
Carl Seiler.

MISCELLANEOUS.

Bitters.—The following official investigation and decision concerning articles called "bitters," but composed chiefly of alcoholic drink, is worthy of permanent record.—[Editor.]

Treasury Department,
Office of Internal Revenue,
Washington, Aug. 22, 1883.

Gentlemen:—Your letter of the 1st instant addressed to this office, and in which you state that, having many inquiries put to you by your customers as to whether it is necessary to take out a special license to sell your bitters, you desire to be able intelligently to inform them what they should do in the premises, and in which you also submit a statement of certain grounds upon which you think your customers should not be required to take out licenses, has been received and very carefully considered.

Your firm is understood to prepare, according to a formula the nature of which you will not disclose, the article called "Hostetter's Bitters," in very large quantities, and to sell it to dealers in all parts of the United States.

Clifford Richardson, Esq., assistant chemist of the Agricultural department, has done me the favor to make a careful analysis of a bottle of the "bitters," and finds it to contain as follows:

Absolute alcohol	32 per cent.
Water	64 per cent.
Extracts, only	4 per cent.

He says it is made from a strong alcoholic liquor flavored with various essential oils, as oil of anise, coriander, etc., and contains some vegetable bitters, such as gentian, cinchona, etc. It will be seen that the bitters contain at least 65 per cent. of proof spirits, which will be equal to about 82 per cent. of ordinary whisky at 80 per cent. proof, obviously much more spirits than is absolutely necessary to hold the other ingredients in solution.

Containing, as it does, no deleterious drugs and only 4 per cent. of anything like a drug, I should probably be entirely justified in deciding outright that one who sells it for any purpose is a retail liquor dealer within the meaning of clause four of Section 3244, Revised Statutes, which reads as follows:

"Retail dealers in liquors shall pay twenty-five dollars. Every person who sells or offers for sale, foreign or domestic distilled spirits or wines in less quantities than five wine gallons at the same time, shall be regarded as a retail dealer in liquors."

Such a ruling would seem to be supported by a letter of the honorable Assistant Secretary of the Treasury, dated January 8, 1883, as follows:

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
WASHINGTON, D. C., Jan. 8, 1883.

Sir:—This department duly received your letter dated Aug. 26 last, relating to a seizure in your district of two cases of Hostetter's Bitters imported there from Portland, Oregon.

It appears from your letter that on being requested by an officer of this department to seize the bitters, you "peremptorily refused," and thereupon that he made the seizure and delivered the merchandise into your custody, in which it now remains.

The importers claim that the bitters are a patent medicine, not a distilled spirit, nor wine, and that they, therefore, may be admitted into Alaska under the present regulations.

A letter from the Commissioner of Internal Revenue, dated Dec. 6, 1878, states that such bitters contain a sufficient quantity of alcohol to hold the other ingredients in solution, and that they are sometimes sold by the glass by retail liquor dealers; and that it is stated that the merchandise is sold "by the drink" in saloons at Sitka.

The department is of opinion that, notwithstanding they may be classified under the internal-revenue laws as medicinal bitters, they should be excluded from Alaska under the executive order of February 4, 1870, forbidding the importation of distilled spirits into that Territory.

The courts have decided that certain bitters, substantially similar in character, imported into the United States are dutiable as distilled spirits.

You will take action accordingly, and in future seize importations of such bitters into Alaska, and dispose of them in the usual manner.

The bitters already imported and in your custody, as aforesaid, may be released, provided they shall be sent out of the Territory at the expense of the claimant. Very respectfully,

H. F. FRENCH,
Assistant Secretary.

COLLECTOR OF CUSTOMS, *Sitka, Alaska.*

The last clause of Section 3246, Revised Statutes, is the only other provision of positive law bearing upon the subject. That clause is as follows:

"Nor shall any special tax be imposed upon *apothecaries* as to wines or spirituous liquors which they use exclusively in the preparation or making up of medicines."

It is, to say the very least, doubtful whether that provision in any way applies to your bitters; but inasmuch as this bureau has for many years classified the preparation as a proprietary medicine and collected stamp tax upon it as such, I cannot avoid treating the subject raised by the questions you propound in a manner somewhat different from what I probably should if the point were one of first impression.

In view of the premises, the question of whether dealers in your bitters should be required to pay special tax as liquor dealers seems to me should depend upon the use made of the article sold. If in good faith it is, in fact, sold as a medicine only by a dealer, and especially if sold to fill a *bona fide* prescription given by a reputable physician precisely as other prescriptions are given and filled, such dealer will not be required to pay the special tax, and he will, it is presumed, feel no uneasiness upon the subject so long as he is conscious that he is certainly selling it only as a medicine. On the other hand, if a dealer sells it as an alcoholic beverage, stimulant or intoxicant, and especially if he does so habitually, there is no reason why he should not be compelled to pay the special tax imposed by law upon all liquor dealers, for in such a case he is really selling it for the whisky it contains, and the other ingredients are sold only incidentally. Whether a dealer fall within one category or the other will depend upon the facts, and the revenue officers, while claiming no tax from dealers in genuine medicines, will endeavor not to be deceived by any device which may be resorted to by any dealer who may have an intent to sell it merely as an intoxicating beverage and who may wish to cover up that intent and evade the law.

As all compounders and rectifiers of spirits and all wholesale and retail liquor dealers *are* required by law to pay special taxes to the United States, it is the manifest duty of this office to see that they do so.

No mere medicine is any longer taxable in any form, but to draw the line nicely, and fix definitely where the medicine may end and the alcoholic bev-

erage begin, is a task which has often perplexed and still greatly perplexes revenue officers, and especially where a preparation contains so large a proportion of alcoholic spirits as yours does. This difficulty is not relieved in this case by the showing made by the analysis.

The medicinal or vegetable ingredients used do not appear to so predominate as certainly to give an absolute medicinal character to the preparation. Indeed, it might be concluded, without doing much violence to the probabilities of the case, that the distilled spirits are, proportionately, so large as not to be materially affected by the other mild ingredients, and that, therefore, while the preparation may, in some cases, be useful as a medicine, it may also be used very well as a mere "drink." The bitters do not present the case of a preparation like laudanum or camphor, in which, although the greater proportion of distilled spirits, yet the other ingredients are of such a powerful and predominating quality as to give character and unfit it for use as a beverage.

It is well known that various compounds, composed for the most part of alcohol or distilled spirits, are upon the markets of the country, and that they are especially adapted and probably designed for sale to the minority in those communities where so-called local-option laws prevail, or where the sale of distilled spirits is otherwise forbidden by statute. Such compounds also find purchasers among a small class who prefer to drink stimulating or intoxicating beverages under some name less unpopular than that of whisky.

These preparations usually sail into market under a medicinal flag, and while the law was such as to enable them to be taxed by stamps under a classification as proprietary medicines, the tendency or policy in this office was toward a liberal judgment in the direction of so classifying them, and especially where a formula, by which they were claimed to be made, was presented, accompanied by an affidavit that they were made according to it, and that they were designed, in good faith, to be used only as medicine. The result of such a tendency, it is true, was to get the largest amount of revenue for the Government; at the same time it gave a greatly increased salable and mercantile value to the preparation so classified. Though an inquiry was made in each case, probably it was not so strict as it should be now, since the law is changed, and since this office has information that such preparations are being extensively used in a manner different from what was stated by their makers to be designed at the outset.

It may well be that a compound can be used both as a medicine and as a beverage. When used in good faith as a medicine only, though it may contain distilled spirits, dealers in it, under such circumstances, will not be held liable to pay the special tax; but suppose it is not only capable of being used as an intoxicating beverage, but also that it is in fact sold and used as such by individuals or by a large class of a community, surely the law, as well as justice to the regular liquor dealer who pays his tax, requires that the special tax shall also be collected from those who make and from those who thus sell such compounds for such a purpose.

If Hostetter's Bitters is in any locality sold and used as an alcoholic beverage, stimulant, or intoxicant, those who thus sell it will be liable to pay the special tax. The circumstance that it is used only as a medicine in one community will not exempt from liability to tax those dealers in it in any other locality who may, in fact, sell it as an alcoholic beverage. Each case must depend upon its own facts, and hence this office cannot now lay down any other general rules than such as are stated in this letter, and in a circular recently issued from this office, No. 268, dated July 16, 1883.

A copy of the circular is enclosed, and your attention is directed to it. It was called out by numerous letters addressed to this office, and in view of the law, as I construe it to be, since the repeal of Schedule A, following Section 3437 of the Revised Statutes. That circular will be adhered to, and you will observe that while a compound is not regarded as a medicine simply because it is called so, nor unless the name and use of it as a medicine agree, still the circular advises collectors to regard as presumptively medicine those preparations heretofore paying stamp taxes as such, but that if in fact, they are now sold and used as alcoholic beverages, the presumption that they are medicines is destroyed in such instances. It may also be added that so studious was this office to avoid a duplication of the special taxation, that it also instructed collectors that where parcels of a proprietary preparation had in fact been made and, under the policy then prevailing, stamped prior to July 1, 1883, Circular No. 268 would not apply to such goods as were actually made and stamped before that date. This clause of the circular was perfectly plain, though some designing persons have attempted to misrepresent its intent and meaning.

District attorneys and collectors will, no doubt, carefully investigate the facts in each particular case, and will be able to discriminate between a case where a preparation is used only as a medicine in good faith and a case where a preparation is called a medicine because of some mercantile advantage in doing so, but which is in fact used as an intoxicating beverage.

I have been at pains to state quite at length the position of this office, and you will observe that I do not decide whether, in the abstract, your preparation is a medicine or not.

Should I hold it to be a medicine, I should probably do violence to an almost irresistible tendency of the mind to conclude that no genuine medicine needs so much whisky and so few drugs in it, unless under very unusual circumstances. On the other hand, should I decide that it is no medicine at all, I would be confronted by a ten-year' *quasi* recognition by this office to the contrary, as well as by the practice of many people who use it as such.

Since Circular No. 268 was issued I have been careful not to decide directly whether a preparation was a medicine or not, unless I had before me a report from the collector stating all the facts. Such a report I have not in this case.

My efforts will be directed to the ascertainment of the facts as to the use to which your preparation is

put, for upon the character of its use in a given case will depend the question of the liability of the dealer to pay special tax.

The courts have decided one case since Circular No. 268 was issued, viz., that of the United States vs. Frederick Cota, which was tried before Judge Withey of the western district of Michigan.

The views of the learned judge in that case were identical with those entertained by this office as to the law in the premises. A full report of the case as found in the Internal-Revenue Record is as follows:

United States District Court, Western District of Michigan, Northern Division.

UNITED STATES VS. FREDERICK COTA.

Before Hon. S. L. WITHEY, District Judge.

Information for carrying on the business of a retail liquor dealer without the payment of the special tax. Trial, July 24, 1883.

The evidence in this case showed that the defendant kept a boarding-house and had a bar where he sold cider and an article known as "Reed's gilt edge tonic," by the glass or drink, to all persons who called for the same; that the tonic was sold in considerable quantities, by the glass or drink, to persons who drank it as a beverage as other liquors are drank, and that persons became intoxicated thereby; that said tonic was generally sold at saloons and drinking places in that vicinity, and contained a large precentage of distilled spirits.

It was claimed on the part of the Government that the evidence showed that this tonic was "compound liquors," within the meaning of the *third* subdivision of Section 3244, U. S. R. S., and that the manufacturer of such compounds was liable to pay a rectifier's special tax, and that the defendant was guilty under the information for selling the same in the manner shown by the evidence.

The court charged the jury in substance, that if the article sold was a medicine and contained spirits simply to preserve its medicinal qualities and was sold and taken as a medicine in good faith, that the defendant should be acquitted. But if the jury found from the evidence that the article was a compound containing such a quantity of spirits as to be intoxicating, and was sold by the defendant as a beverage, he knowing its intoxicating quality, and was drank by persons *not* as a medicine but as a *beverage, because* of its intoxicating and stimulating qualities, then, no matter by what name it was known or called, the defendant was guilty as charged.

The jury returned a verdict of guilty, and the defendant was fined $300 and sentenced to imprisonment in the custody of the marshal for thirty days.

It is not desired to exact a dollar in taxes not fairly due, nor to claim any tax from dealers in any preparation which is fairly a medicine and in good faith used as such; but we do not doubt that all the Federal courts will hold views similar to those announced by Judge Withey, and, unless the special taxes are paid without question, I desire the courts speedily appealed to, wherever there are fair and reasonable grounds to believe that a preparation containing a large proportion of distilled spirits is sold and used as an intoxicating beverage, and not *bona fide* as a medicine.

The law is my only guide in such matters, and in such cases I regard it as requiring the payment of the tax, and I have no option but to collect it.

As to the suggestion that you should be repaid the amount you have heretofore paid the United States upon your bitters as a proprietary medicine, only a few lines need be added. There has never been any disposition on my part to enquire whether your preparation was used or sold otherwise than as a medicine previous to July 1, 1883. I have your sworn statement that it was before that date a proprietary medicine only, and you voluntarily, and from choice, had it classed as a medicine, and paid the stamp tax upon it as such, without question, up to that date. The Government took you at your word, and still does so as to everything done before July 1, 1883.

The whole question was carfully considered when Circular No. 268 was framed, and it was not doubted, either by this office or by the honorable Secretary of the Treasury, whose advice was asked upon it, that all claims for a refund of such taxes would be wholly unfounded, nor was it doubted that the makers of such compounds would be estopped from claiming such refund by their own assertions that their preparations were medicines and by their voluntary payment of the stamp tax as such.

Since July 1, 1883, if the preparations have also, in fact, been sold and used as alcoholic beverages, special taxes as liquor dealers will have to be paid by those who sell them as such, and who by doing so pervert the original purpose of their preparation, as stated under oath by the makers of them. Whatever may have been done prior to July 1, 1883, when the article was taxed as a proprietary medicine, and was, as I assume, in good faith so used, *now*, in cases where the original purpose of the preparation is perverted, and instead of being used as a medicine it is used as an alcoholic beverage or intoxicant merely, the seller of it in this manner must be treated as a liquor dealer, and taxed accordingly.

It is argued that Congress by repealing Schedule A, whereby stamp taxes were removed, meant to relieve such articles altogether from taxation. It is certainly true that Congress did repeal the law laying a tax upon *medicines, but it is equally true that Congress did not remove the tax from retail liquor dealers.* and our efforts must be directed to ascertaining whether, as a matter of fact, a dealer *bona fide* sells medicine and is exempt from tax, or sells alcoholic beverages and is liable to it, our whole difficulty arising from the fact that such preparations are susceptible of use both as a medicine and as a "drink." You can therefore see how, acting in good faith, your customers can determine, each for himself, whether there is a liability to pay special tax as liquor dealers—in other words, to "take out licenses."

When a preparation, considered with reference to its ingredients, may be one thing or another, according to its use, I will let the use give charaeter to it. If used or administered *bona fide* as a medicine, as a medicine it will be treated, but if persons ignore its medicinal properties and sell it to be drank as an in-

toxicating beverage, the act should be regarded as a retailing of spiritous liquors, and the seller made to pay the tax accordingly. This seems to me to be the true rule, *and an article containing so little that is even nominally medicinal as yours does ought and will be subject to very close scrutiny as to its use.*

Very respectfully,

WALTER EVANS,
Commissioner.

Messrs. HOSTETTER & SMITH,
Pittsburgh, Pa.

The following items of interest are clipped from the *Daily Times* of this city, just as this number of THE JOURNAL goes to press.—[ED.]

YELLOW FEVER.—SPREAD OF THE SCOURGE.

NEW ORLEANS, Sept. 6.—[Special.]—A special to *The Times-Democrat* from Pensacola announces thirteen new cases of yellow fever at the navy-yard, three of whom are colored, and seven deaths including Charles Grady, boat-keeper for the pilot boats, and two privates of the United States marines, who died at the marine hospital.

HISTORY OF THE EPIDEMIC.

A letter from Pensacola navy-yard in regard to the yellow fever has been received at Washington which says complaint is made that the navy department has been utterly indifferent to the welfare of the command and that no amount of argument on the part of anyone would have served to modify in any particular the policy of the department toward the Pensacola yard. The writer says: "We are here to stay so long as our services are required, and one and all stand ready to face the situation with strong hearts and cheerful courage. We are determined to make the best of everything and trust in Providence to carry us safely through the season of sickness. I must admit, as the summer advanced and no disease of a contagious character made its appearance, I felt encouraged and believed we were going to escape a visit of the terrible scourge. We all felt confident that for once yellow fever could not come among the force stationed here. Every attention had been given to the sanitary condition of the yard, Dr. Owen making personal inspection, and he pronounced the quarters in the most excellent sanitary condition. We believed the yard to be entirely free of fever germs, and the command in perfect health, but we were deceived.

Less than two weeks after our inspection a suspicious case of fever made its appearance in the garrison. It was on the morning of August 12 that a private in the marine corps, named Flaherty, went to the officer of his command and said he was sick. He was ordered by the doctor to go to bed. At that time the nature of the complaint was not apparent, and the sick man went to the barracks until the symptoms became more pronounced. It was, to our horror, yellow fever. The bedding was destroyed, and every precaution taken at once to kill the germs. The case proved fatal three days after. Corporal Benson was the next man taken sick, and then Private Barger, who lived only four days. Barger and Flaherty were, I am told, very abstemious men, and were exceptional in their conduct as well as careful about their health. Where or how Flaherty got the disease is a mystery to every one here. The case of Barger is even a greater mystery. After various theories had been advanced it was found that the quarters occupied by the marines were infected, and that in 1875 there were some cases of fever in these quarters. Notwithstanding the care taken to avoid the infection, the removal of the command from the marine barracks was followed by two cases of fever. There was no inconsiderable amount of anxiety on the part of the residents of the yard when they found that yellow fever had made its appearance among the marines. The marine guard was promptly quarantined; and duty of all kinds was suspended, and it was with feverish expectation that developments were awaited.

Dr. Owen was taken sick Thursday, August 16, and immediately went to his bed. This left the yard without a surgeon. Poor Owen's case was indeed a sad one. He had worked day and night until he was completely tired out and broken down. The very day he was taken sick his wife and family were to have gone north. Their plans had been arranged, and the evening train was to have carried them away. The illness of the doctor put a stop to all thought of leaving the yard. A strict quarantine was placed against the yard, and egress was at once ended. Owen was without medical treatment for two days. When it became evident that his case was assuming a very serious form, authority was requested to employ a civilian physician. Dr. Hargis, an old practitioner from Pensacola, was employed at a salary of $100 a day. Owen died on Wednesday, the 22d of August, at noon, and was buried at once.

Mrs. Owen was taken sick Thursday. She lived but a few days. The poor woman was carried to the grave at the dead hour of midnight, her little children fast asleep as the lifeless body of their mother was being borne through their room on the way to burial. A sadder, more heartbreaking occurrence than that has seldom taken place. The youngest child is an infant less than four months old; a bright, splendid boy; the other children, three in number, are left to the care of no one. Freddie, the oldest, was taken sick on the 28th of August. Paymaster Brown, who has since died, his wife, and daughter, were all sick. Lieut. Whipple was taken down with the fever on the 23rd, and was cured by Dr. Bosso (who has since died), whose treatment had been more successful than that of the regular practitioners.

There have been upward of forty cases on the reservation, the deaths numbering fifteen. I am told that early this year Dr. Owen predicted that yellow fever would make its appearance on the reservation during the summer season, for the reason that articles infected with the disease had been brought here from Pensacola. The government steam launch was simply a passenger boat for the residents of Warrington and Wolsey. It made three trips a week to Pensacola, loaded down with people. So great was the traffic, that it is understood that officers of the yard declined to use the boat, preferring to be conveyed by the army launch. Early in July, Dr. Owen

addressed a communication to the commandant of the yard, warning him of the danger of too frequent intercourse with Pensacola, and advised him to restrict the travel and reduce the frequency of the launch trips.

DR. RAUCH'S REPORT.

SPRINGFIELD, ILL., Sept. 6.—[Special.]—Dr. John H. Rauch, as executive officer of the Sanitary Council of the Mississippi Valley, in his monthly report says that during August the supervision of the river and rail inspection service by the Executive Committee of the Sanitary Council has been confined to New Orleans, Vicksburg (at Fort Adams), and Memphis (at President's Island). At New Orleans sixty-five steamboats and other river craft, with an aggregate capacity of 71,816 tons, and carrying 2,684 officers, crew and paasengers, were inspected and fully provided with the certificates of the Sanitary Council. On the Illinois Central and Louisville & Nashville railroads, at the same points, there were inspected 139 freight trains, comprising 1,911 loaded and 1,523 empty cars, together with their crews of 834 persons. At the inspection stations at Fort Adams, below Vicksburg, and on President's Island, below Memphis, an aggregate of 228 river craft, with a capacity of 224,440 tons, and carrying 15,028 persons, were inspected. These boats were found in good sanitary condition, and no suspicious illness appeared among those on board, although there were a number of cases of the malarial fevers of different forms, mainly intermittent. An aggregate of 770 ocean vessels, river craft, and freight trains, with a capacity of 893,231 tons, and carrying 27,888 officers, crew and passengers, have been inspected under the supervision of the Council since July 1, 1883. With the exception of one suspicious case in the early part of last month, in Jackson county, Mississippi, on Fort Bayou, near the coast, there has been a very unusual absence of anything like yellow fever in the area in which the inspection service is maintained. In the exceptional case alluded to, the Mississippi State Board of Health acted upon the hypothesis that the disease was yellow fever, although the diagnosis was conflicting and the weight of epinion against that conclusion. An inspector was at once put on duty in the district, the locality was placed under a quarantine of isolation for fifteen days; disinfection was resorted to, and nothing further of a suspicious nature has since developed. New Orleans has not been so free from alarm, or cause for alarm, during the corresponding months of many years as during the sixty days just closed.

NEW ORLEANS MERCHANTS.

NEW ORLEANS, Sept. 6.—[Special.]—A meeting of the Chamber of Commerce, Produce Exchange, Mechanics', Dealers', and Lumbermen's Exchange, and other commercial bodies of the city, was held to-day to consider the non-intercourse regulation of the Board of Health, which prohibits all vessels from ports where the yellow fever prevails, whether these vessels are infected or not, from coming up the river. The Board of Health met later in the evening, passing a resolution wherein they asked the Governor to repeal his non-intercourse proclamation on the 15th of the present month, and reestablish the quarantine formerly prevailing of ten days against vessels coming from Vera Cruz, Havana, and all infected ports. They recite that the summer is near gone, that the city is perfectly healthy, and that any infection or outbreak of fever here is near impossible. They believe, therefore, that a ten days' quarantine will be sufficient to protect New Orleans. As the Governor holds that he must carry out all the resolutions of the Board of Health, an order abolishing the non-intercourse system will probably be issued within a few days.

SIR SPENCER WELLS has been elected an Honorary Fellow of the Physico-Medical Society of Erlangen.

HEALTH OF CONNECTICUT.—The following report, concerning the prevalence of diseases in the principal cities of the State, has been furnished from the office of the Secretary of the Connecticut State Board of Health.—[ED.

State Board of Health Sanitary Report.—By Dr. C. W. Chamberlain, Secretary.

MORTALITY IN JULY.

	Hartford	New Haven	Meriden	Waterbury	Bridgeport	Norwich	New London	Middletown	Killingly
Total deaths	132	186	40	57	68	47	20	23	13
Monthly death rate	30	28	22	27	22	21	9	20	20
Zymotics	90	80	21	30	36	14	6	6	6
Infantile	75	110	..	..	44	..	..	9	..
Nervous diseases	12	17	7	6	2	..	..	..	1
Heart diseases	3	7	..	3	4	..	2	1	1
Scarlet fever	1	3	..	1	..	1	..	2	..
Typhoid fever	..	2	..	4	..	..	..	..	..
Typho-malarial fever	..	1	..	..	..	1	..	..	..
Malarial fever	2	2	1	..	..	..	1	..	..
Diphtheria and croup	20	4	..	..	2	..	..	..	..
Measles	2	..	..	1	..	2	..	..	..
Whooping cough	..	3	..	..	..	2	..	..	..
Infantile diarrhœa	56	64	15	20	26	7	4	3	5
Diarrhœ and dysentery	8	5	5	4	2	..	..	1	1
Consumption	3	10	2	4	7	4	2	3	2
Pneumonia and acute lung	4	5	2	..	1	..	1	..	..
Old age	3	..	1	..	..	..	..	..	..
Railroad accidents	3	..	..	..	..	..	..	..	1
Accident and violence	1	10	1	1	2	2	2	2	..
In public institutions	10	14	..	..	..	..	2	..	..

The leading type of disease during the month has been, as usual, infantile dirrhœa, which has persisted to an unusual degree, when the comparative coolness of the weather is taken into consideration. Hartford still maintains the place at the head of the column of the monthly rate proportion of zymotics and infantile deaths, although in the last report New Haven is about the same. The comparative mortality is not so much greater as in previous years, as this is always a season when a high death rate among children is expected. The persistency of diphtheria, which is so clearly a filth disease, so far as its local causation in Hartford has been traced, appears to be due to the want of traps under house fixtures, faulty plumbing, unventilated house drains, and unventilated sewers. The need of an ordinance

to fix a sanitary standard, at least, for all new tenement houses, is being emphasized every season. Diphtheria does not thus persist without a cause. If there could be an ordinance passed compelling all house drains to be ventilated, it would improve the sanitary condition of the city greatly, but if this be too radical a step the future at least can be guarded by proper provisions for all new buildings. Many cities have such regulations, and also many villages, and the results are more than commensurate to the expense and trouble involved. The mortality from infantile diarrhœa in New Haven has been very carefully investigated by Dr. Lindsley, the efficient health officer of that city. He finds that the greatest part occurs in streets that have no sewers, where cesspools and vaults store up the excrementitious filth, and thus render it possible to again reach the system through polluted air or water. To a considerable extent this is also true of Hartford.

Throughout the State, generally, about the same relative frequency of infantile diarrhœa and diarrhœa and dysentery among adults, in comparison with other diseases, is reported, as the table indicates. The greatest prevalence is in the more densely populated districts. The country is comparatively free, that is from infantile diarrhœa. There has not been as much cholera morbus, but dysentery has appeared much earlier than usual, due probably to the cold nights.

Malarial diseases are reported as unusually prevalent in places like Manchester. where they have more recently appeared, while in the places where they first appeared but little prevalence is noted, and the deaths from typhoid fever exceed those from all forms of malarial fever. Still, even in these places, there have been quite a number of cases of acute intermittent fever, which has not been noticeable here before for several years. Upon the whole, however, the malarial influence appears to be waning very decidedly, and its effect upon other types of disease less marked. The sale of quinine at the drug stores has rather decreased in comparison with that of former years, as far as I can learn. The progress into new territory is slow, but few towns report cases. Hampton, in Windham county, reports a few cases. This is one of the hill towns, with little swampy land comparatively. Several cases are reported from Watertown, Naugatuck, Monroe, Haddam, Suffield, Windham and Westport, but in general malarial diseases occupy a much less prominent place, while typhoid fever is increasing in frequency.

Diptheria has already been mentioned with reference to its persistence in Hartford. Cases are reported from Westport, one fatal, also quite a number of cases of tonsillites, which has been unusually prevalent for the season when there are usually few if any cases. South Manchester, Manchester, Plainville, Talcottville, report cases of diphtheria, and several other localities a case or two. But very few cases of scarlet fever are mentioned; one fatal case from Canaan is reported.

Whooping cough has been quite prevalent in several places. Westport, New Canaan, Monre, and Windham mention the disease, while it appears to be almost epidemic in Suffield and Greenwich. A few localities mention measles; seven cases in one family are reported; Naugatuck, Greenwich, New Canaan, Westport and Suffield, among others, report cases. Comparatively, however, the cases are very few.

In addition to the fatal railroad accidents in the table, three are reported from Plainville. Several cases of drowning are also reported.

The sanitary history of the month, while indicating plainly the loss of life from the neglect of sanitary laws, and also as a consequence a needless waste of life, and thus unfavorable, is not much worse than previous years. From such plain lessons as it gives, our power to control to a great extent the ravages of diseases that destroy many more lives than the dreaded cholera is repeatedly demonstrated.

From the following, taken from the *Canada Lancet*, it will be seen that our Montreal friends are not in perfect accord: "The Victoria Medical School, Montreal, which is in affiliation with Victoria College, Cobourg, has been in successful operation for several years, but a strong rivalry prevailed between her and the Laval University medical school. Instructions were issued by the authorities of the church that Laval should be supported. The professors and students of Victoria continued to act contrary to the spirit of the official declaration. An order was then issued to the Sisters of Hotel Dieu to refuse admission to all professors and students, except those of Laval. The Sisters appealed to Rome, and the professors to a committee of provincial bishops. The latter have decided that no Catholic can conscientiously form part of Victoria School or attend lectures there, and those who do so cannot be admitted to the sacrament of the church, and the former have been again ordered to close their doors to professors and students of Victoria. This mandate effectually disposes of the Victoria School of Medicine, which is much to be regretted, as the school was doing a good work, and was, besides, a means of stimulating healthy rivalry in medical teaching. Just as we go to press we learn that a cablegram has been received from the Pope, ordering the Victoria school to be carried on as usual for the present."

At the semi-centennial celebration of the McGill Medical College, Montreal, in October last, a gentleman offered $50,000 if, by August 1st, 1883, an equal sum was raised, in commemoration of the late Dean, Dr. G. W. Campbell. This has been done, and Hon. D. A. Smith has given to Dr. Howard a check for $50,000, to be known as the Leanchoil endowment. Mr. George Stephenson has given $50,000 to the General Hospital for a memorial wing to Dr. Campbell.—*Medical News.*

We learn from news in the daily press that the date of expiration of the term of the Surgeon General of the Navy is in dispute. In 1879 there was a vacancy in the office, and on August 1st Medical Inspector Wales was appointed to the place, but did not receive his commission until January 20th, 1880. The office is held for four years. His appointment was at that

time much opposed by several surgeons who were Dr. Wales's seniors in rank. It is now claimed by them that his term of office expired August 1st, and Dr. Wales claims that it does not until January 20. The question may be submitted to the Attorney General for his opinion.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM ———, 1883, TO AUGUST 31, 1883:

Clements, Bennett A., major and surgeon; relieved from duty with the Army Medical Examining Board, New York City, N. Y. (par 11, S. O. 193, A. G. O., August 22, 1883).

Kimball, James P., captain and assistant surgeon; relieved from duty in Department of the Platte, and to proceed to New York City and report in person to the President of the Army Medical Examining Board for duty as a member of that Board, *vice* Surgeon Clements, relieved (par. 11, S. O. 193, A. G. O., August 22, 1883).

NECROLOGICAL.

EMMONS LEWIS, M.D., was born at Woodstock, Vt., May 22, 1804. He died at Hartland, Vt., Aug. 13, 1878.

He was the youngest son of Solomon and Prudence Taft Emmons, being one of nine children, five sons and four daughters. He studied medicine with the distinguished Dr. Gallup, of Woodstock, graduated from Dartmouth Medical College in 1830.

He settled in practice in Shipton, Canada, where he remained until 1837. While there he learned the French language to speak it fluently. Upon his return to Vermont in 1837, he married Miss Jane Sylvester, of Woodstock, and settled in medical practice at Hartland, where he remained until his death. About twenty years after marriage, his wife died of cancer of the stomach. In December, 1857, he was married again to Miss Melinda Hendrick, of Hartland, who survives him. He had no children. He was a prominent man in his county, represented his town in the Legislature in 1866 and 1867. He was a man of energy, of literary tastes and good social qualities, a member of the Congregational church, and a Christian gentleman.

O. F. FASSETT, M.D., of Vermont.

DU HAMEL, WILLIAM JAMES CHAMBERLIN, M.D., of Washington, D. C. Was born in Maryland, January 18, 1827; died of apoplexy at his residence, 338 Indiana avenue, August 15, 1883. He was on his father's side of French descent. His grandfather, Baron Du Hamel, was a surgeon with the French army co-operating with General Washington in the war of the American Revolution, and was at the surrender at Yorktown. The French surgeon married and settled in Maryland, where he practiced his profession and became a successful planter.

The subject of this sketch was educated at St. Mary's Seminary, in Baltimore, and received his M.D. degree from the University of Maryland in 1849. Shortly after this he removed to Washington, where he practiced his profession with success and reputation until about 1869, when he removed to the city of Baltimore, where he became actively engaged in general practice for a few years, when he returned to Washington, but did not again enter actively into practice.

Dr. Du Hamel became a member of the Medical Society of the District of Columbia in January, 1853, and of the Medical Association of the District the same year. The Doctor was sent a delegate to the American Medical Association in 1853, attended subsequent meetings from Washington in 1855, 1858, 1864, 1866, 1868, and 1869, and from Baltimore in 1870 and 1872. He was also a member of the old Pathological Society of Washington, organized in 1852. Dr. Du Hamel had a fondness for scientific inquiry, and was a member of quite a number of societies engaged in prosecuting inquiries in special directions. The Doctor married, shortly after settling in Washington, a widow lady of culture and means, and always enjoyed a good social position, to which his tastes and gentlemanly bearing entitled him. He leaves a widow and four children, with a fair competence and the inheritance of an honorable name.

J. M. T.

GILMAN, JUDSON, M.D., of Baltimore, Md. Was born in Meredith, N. H., December 22, 1818; died at his residence, in the city of Baltimore, August 1, 1883. He was a descendant of Edward, the progenitor of all the Gilmans in this city, and came from Hingham, England, in 1638. The family is numerous and influential throughout the New England States. He was educated at Roxbury, Mass., and graduated in letters at Colby University, Waterville, Me. His medical degree was taken after full course of lectures at the University of Maryland, in 1845. Immediately after he began practice in Baltimore, and gradually acquired a good, remunerative business.

In 1853 he joined the Medical and Chirurgical Faculty of Maryland, an organization in which he was greatly interested, and by which he was honored with various official positions. He entered the military service as surgeon of the Fifth Maryland regiment early in the late war. He was disabled from duty in 1863. After this he was acting assistant surgeon in the hospitals at Point Lookout from October, 1863, to the close of the war.

In June, 1845, Dr. Gilman was united in marriage to Mary A. Willis, who survives him. They had no children. From 1850 to 1860, excepting 1855 and 1856, he was Secretary and Assistant Commissioner of Health for the city of Baltimore. In 1866 he was State Inspector of Guano. He was a member of the different medical organizations of the city and county of Baltimore, and of the American Medical Association since 1855, and attended seven meetings, the last time in 1880 in the city of New York. He was also an active member of the Maryland Historical Society. He did much to revive an interest in the library of the Medical and Chirurgical Faculty of Maryland, which is now growing to be an iinstituton in which the profession not only of the city of Baltimore but of the State may be proud.

J. M. T.

THE

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ORIGINAL ARTICLES.

ON EARLY TAPPING IN CASES OF ASCITES.

BY AUSTIN FLINT, M.D.

[Read at the meeting the of Section on Medicine of the British Medical Association, in Liverpool, August 2, 1883.]

MR. PRESIDENT AND GENTLEMEN: The subject which I have selected for a short paper cannot, perhaps, be said to belong in the higher regions of pathology and practice, but it is one which, as it seems to me, has considerable material importance.

Most writers on practical medicine at the present time, as in the past, recommend tapping, in cases of ascites, as a last resort, to be employed only when the dropsical accumulation has occasioned an alarming interference with respiration, and after other measures of treatment have proved ineffectual.[1] The practice of most physicians now, as hitherto, I suppose to be in accordance with this recommendation. Many years ago I was led by reasoning and by clinical observation to advocate tapping early in cases of that affection. In 1863 I communicated for the *American Journal of Medical Sciences* an article entitled "Clinical Report on Hydro-peritonæum Based on an Analysis of Forty-six Cases." The histories of these forty-six cases I had recorded. The results of the analysis seemed to show the utility of tapping early and as often as the dropsy returned. Since the date of that report, in the cases which have come under my observation in hospital and in private practice, I have pursued this course of treatment, and the results have appeared to confirm its utility.

The objections brought against tapping early, and it may be, repeatedly, in cases of ascites, are—

1st. It is liable to be followed by alarming prostration, and it may even prove fatal in subjects greatly enfeebled.

2d. It sometimes proves fatal by inducing peritonitis.

3d. Relief procured by tapping is usually but temporary, the dropsy, as a rule, speedily returning.

4th. With every return of the dropsy a lage quantity of albumen is withdrawn from the blood. The vital forces are thereby impaired, and, although temporary relief may be obtained, the duration of life is shortened.

In no instance under my observation has either a fatal result or alarming prostration followed tapping. On the contrary, relief, immediate and pronounced, has been invariable. I have met with but a single instance in which peritonitis was induced by tapping. In that instance, ascites from cirrhosis was associated with general dropsy from chronic Bright's disease, the latter, as is well known, involving a predisposition to inflammation of serous structures.

All danger in the direction of either exhaustion or peritoneal inflammation is probably avoided if, instead of the ordinary mode of tapping, aspiration be employed. The slowness with which the liquid is withdrawn by aspiration, obviates any risk of exhaustion, and the insignificant puncture with a small trochar can hardly give rise, in any case, to peritonitis.

Two objections may be raised to aspiration. One of these is the length of time required for the operation, and the fatigue on the part of the operator, in removing by this method a large quantity of liquid. It is an answer to this objection that the manual part of aspiration does not call for a skilled hand, and therefore, the assistance of a nurse or an attendant may be made available. The other objection is the inconvenience often of having at hand an aspirator. This objection is met by substituting for the beautiful but cumbersome apparatus of Dieulafoy, or the adaptation of the stomach pump by Braditel, a very simple arrangement which I devised many years ago for thoracentesis. The instrument used is that known in the United States as Davidson's syringe.[1] It consists of an India rubber hollow bail of a size to be readily grasped by the hand, connected with which are two India rubber tubes. By the introduction within the base of moveable valves, one of the tubes is made afferent, and the other efferent. At the end of the afferent tube is an attachment for connecting with it a small counter. The aspiration through this tube is effected by the expansion of the central ball, and the latter by compression with the hand, is emptied through the efferent tube. For thoracentesis and all other applications of aspiration, this homely instrument is all that could be desired, except in an æsthetic point of view. Its advantages are its cheapness, its portability, its durability, and its being always in order for immediate use.

The more important of the objections which have been stated to tapping early and repeatedly in cases of ascites, are that the relief which it may afford is but temporary, and that life is shortened by the impairment of the vital forces consequent on the loss of the nutritive constituents of the blood.

Regarding these objections from a rational stand-

[1] As an exceptional instance I may mention the "Hand Book of Medicine," by Dr. Frederick T. Roberts.

[1] My instrument is called in England Higginson's Syringe.

point, the measures of treatment pursued by those who delay as long as possible tapping, are to be contrasted with the advantages of the latter. The measures other than tapping generally have for their object the removal or the diminution of the dropsy. The measures are sudorifics, diuretics, and hydrogogue cathartics. Sudorifics accomplish so little, that nothing is to be said in their favor. Very little can be said in favor of diuretics. The instances are rare in which much is accomplished by this class of remedies. Hydrogogue cathartics are more efficient. Elaterium, the pulvis purgans and the saline carthartics sometimes diminish considerably, and they may even remove the dropsy. Their uncertainty, however, must be admitted, and, when more or less effective, the object is usually accomplished slowly, not a little depression and perturbation being caused by their repetitions. Now, is it not a rational conclusion, inasmuch as by tapping the removal of the dropsy is effected with certainty within a few hours, or even minutes, the operation being harmless and giving very little pain, that this method of treatment is to be preferred? And in view of these advantages of tapping, why waste time in an endeavor to effect the object by drugs?

Here, as in regard to all therapeutical questions, an appeal must be taken from reason to experience. And in deductions from experience, as well as in rational conclusions, the different affections of which ascites is a symptom are to be taken into account. If the ascites be symptomatic of malignant disease, and where it depends on persistent occlusion of the portal vein from thrombosis, embolism, or the pressure of a tumor, tapping, as well as other measures for the removal of the dropsy, cannot be expected to promise often more than temporary relief. But in the cases falling in this category, it has seemed to me evident that life is prolonged by tapping, repeated as often as need be; and, on the other hand, life has seemed to me to have been shortened by the use of depressing and perturbating drugs. In the great majority of cases, as is well known, cirrhosis of the liver is the affection having a causative relation to the dropsy. Now, in a certain proportion of these cases, the dropsy is dependent on auxiliary causes cooperating with the hepatic lesion. Anæmia, anorexia, impaired digestion, etc., the effects of alcoholism or of other agencies, are more or less involved in the causation of ascites. Without these auxiliary causes, dropsy would not have occurred, and the cirrhosis perhaps would have been well tolerated. These coöperating causes are often, to a greater or less extent, removable. The discontinuance of spirit-drinking may sometimes suffice for their removal. These statements are based on the study of cases which I have recorded. Let the tapping be resorted to as soon as the dropsy occasions notable inconvenience; let auxiliary causes be removed as far and as soon as practicable; let the patient be placed on a tonic and analeptic treatment; let depressing and perturbating drugs be avoided; let tapping be promptly repeated if the dropsy return, and, notwithstanding the existence of a certain amount of cirrhosis, there may be a restoration to fair general health, and its continuance for an indefinite period.

My collection of recorded cases furnishes illustrations of the correctness of this operation. It may be that the dropsy will not return after a single tapping. More frequently, the tapping has to be repeated. The intervals between the repetitions, in different cases, and at different periods in the same case, differ greatly. Even if tapping be repeated many times and after short intervals, I believe the rule to tap as early and as often as the dropsy occasions inconvenience, to be better than to let the dropsy remain, or to undertake to lessen it by hydrogogue cathartics. In one of my recorded cases, the patient was tapped 30 times within 18 months. He had come to regard this measure as a trivial affair, and on one occasion, medical aid not being at hand, he tapped himself, using the blade of a pair of scissors instead of a trocar, and introducing a common clay pipe stem as a canula! He was accustomed, the day after a tapping, to go about his business as usual. This was a dispensary case, and was lost sight of after the thirtieth tapping. At that time he was anæmic, but able to take pretty active exercise. There are some cases of ascites in which a causative lesion, if one exist, may remain permanently innocuous, at least when not associated with auxiliary causes, as shown by the recovery and the continuance of perfect health. Of my recorded cases, a few are in this category.

In concluding my clinical report on ascites, published twenty years ago, I used the following language: "Unpromising as are the majority of the cases of ascites, I cannot but believe that, as regards prolongation of life and as much improvement as is compatible with existing structural disease, the success of medical practice would be enhanced by employing less than has been the custom of physicians, diuretics, hydrogogue cathartics, and other depressing remedies, by resorting earlier than is usually done to tapping, and by a greater reliance on tonic medication, together with hygienic measures to invigorate and strengthen the system."

In conclusion now, after the added experience of twenty years, I hold to the same belief, with a stronger conviction of its correctness, as based on reason and clinical facts.

SUPPLEMENT TO THE PAPER ON EARLY TAPPING IN CASES OF ASCITES, BY AUSTIN FLINT, M.D.

As a supplement to the paper on Early Tapping in Cases of Ascites, condensed abstracts of the histories of twelve cases are appended. The sole object in submitting these cases is to illustrate the practical points presented in the paper. All details not bearing upon these practical points are omitted. The cases are appended without comments, leaving the reader to take note of the particular bearings of the facts, which are cited from the histories for the object just stated.

Case I.—Repeated tappings after short intervals. The patient, at the time of the first tapping, greatly prostrated. Progressive improvement.

A woman, aged 36, who had been employed in a liquor shop, was admitted into hospital August 13. She was confined to the bed and greatly prostrated. She was jaundiced. The abdomen was very tense.

A pailful of liquid was removed by tapping. Ten days after the tapping her condition was much improved. At that time the following note was written: "When this patient came under observation she was extremely prostrated. I felt sure that active hydrogogues would have been dangerous, and I felt equally sure that she would have succumbed under the disturbance caused by the greatly distended abdomen. I am persuaded that the continuance of life, in this case, was due to the tapping."

September 3 the dropsy had returned, and the patient was again tapped. September 16 she was again tapped, and again on October 30. Shortly after the last tapping she left the hospital. She progressively improved, notwithstanding the repeated tappings after short intervals. There were no cardiac nor renal complications in this case. The spleen was much enlarged.

Case II.—Tapping once, and no return of the dropsy, the patient apparently well two months after the tapping.

A woman, aged 35, was admitted into hospital in January. Enlargement of the abdomen had existed for two months. The enlargement, at the time of admission, was very great, and attended with much suffering. The patient was confined to her bed. Tapping at once was resorted to, and a bucketful of liquid removed. Notable immediate relief followed. Improvement was noticed. A month after the tapping, the patient was attacked with cholera morbus. There was no return of the dropsy. After recovery from the cholera, she left the hospital reporting quite well.

Case III.—Tapping after ineffectual treatment by hydrogogues Three months after the tapping the dropsy had not returned.

A man aged 50, a spirit drinker, was admitted into hospital in September. Enlargement of the abdomen began three weeks before his admission. elaterium was given repeatedly, causing only a temporary diminution of the dropsy.

He was tapped in December. The abdomen was then much distended, and the lower limbs swelled. There was considerable emaciation. March 30, it was noted that there had been no return of the dropsy; that the patient reported quite well, and that he had a healthy aspect.

Case IV.—Ascites followed by phthisis, No return of dropsy after 3 years. Notable enlargement of abdominal veins.

A man, aged 46, had had ascites 3 years before his admission into hospital. The dropsy disappeared in 7 weeks. Treatment not noted. He quit spirit drinking in a great measure afterward. There had been no return of the dropsy. He had had good health, and had been able to do full work as a ship carpenter for several months, when the symptoms of pulmonary disease began. On his admission he had pulmonary phthisis and chronic laryngitis. He noticed enlargement of the abdominal veins first at the time of the disappearance of the dropsy. On his admission, the appearance of the abdomen was described as follows: "The abdomen presents a very remarkable spectacle. The abdominal veins are greatly dilated and varicose. This appearance is most marked on each lateral part of the interior aspect of the abdomen, the veins extending upward nearly to the level of the nipples, without the mammary line. An enlarged vein extends along the median line, and one on each side of this line. The blood flows in all these veins from below upward.

Case V.—No return of ascites after a single tapping for a period of two years..

A seaman, aged 22, a spirit drinker formerly, was admitted into hospital with typhoid fever, from which he recovered. Two years before his admission he had ascites, and was tapped. He quit the use of spirits, and there had been no return of the dropsy. There was great enlargement of the superficial veins of the abdomen in this case.

Case VI.—Cirrhosis of the liver in a notable degree without ascites.

A woman, aged 33, when admitted into hospital was feeble and anæmic. She had had several attacks of hæmatemesis. She was progressively improving, when 4 months after her admission, she was seized with pneumonia, which proved fatal. There had been no ascites. The autopsy showed in addition to the pneumonia, a hobnail-liver, weighing only two pounds; also disease of kidneys. This case is introduced as illustrative of the tolerance of cirrhosis as regards dropsy.

Case VII.—Ascites in a case in which tapping was twice performed, and no return of the dropsy a month after the last tapping.

A woman, aged 40, a spirit drinker, was admitted into hospital, with ascites, in October. She was at once tapped with immediate relief. Early in December, she was again tapped. A month afterward there had been no return of the dropsy. The patient was then discharged, reporting and looking well.

Case VIII.—Ascites treated ineffectually with elaterium. Tapping twice, and no return of the dropsy cwo months after the second tapping.

A woman, aged 25, applied at a college dispensary, in April, with ascites which had existed for four months. Some diminution of the dropsy was effected by elaterium, but the diminution was temporary. She was then tapped, and, after two months, the tapping was repeated. Two months afterward there had been no return of the dropsy, and she reported quite well.

Case IX.—Ascites treated by tapping, and return of the dropsy repeatedly after long intervals.

A man, the age not stated, a spirit drinker, was admitted into hospital with ascites, which had existed for two months. It was developed after intermittent fever. He gave the following history: Eight years prior to his admission he had ascites, and after four months was tapped. The tapping was repeated after two weeks. There was no return of the dropsy, and he had good health for six years. The dropsy then returned, and he had also hæmatemesis. Five weeks afterward he was tapped. The dropsy returned but disappeared under the use of medicines, and he remained free from it for about two years. He had

continued to drink spirits more or less freely. The subsequent history is not noted.

Case X.—Ascites referable to thrombosis of portal vein. Tapping ten times within three months. No return of the dropsy, and the patient in fair health eleven years afterward. Diet of milk and gingerbread.

This patient, a man 45 years of age, of good habits, came under my observation, in private practice, eleven years ago. He had been ill for several weeks, his symptoms having been supposed to denote thrombosis of the portal vein. I may mention that the patient's wife, a very intelligent woman, had endeavored to study her husband's case by reading medical books, and the reason of my being called in consultation was the advocacy of tapping in my notes on the Practice of Medicine. The abdomen was greatly distended. Owing to the feebleness of the patient, it had been deemed hazardous to resort to tapping. This measure, however, at my suggestion, was at once employed, and notable, immediate relief followed. Within three months the patient was tapped ten times, The aggregate amount of liquid removed was about 350 pounds. After the last tapping there was only a moderate accumulation of liquid, and this gradually disappeared. The patient slowly recovered, and for the past ten years he has had fair health. His aspect is healthy, and he is accustomed to walk from four to six miles daily.

During the period when the tappings were repeated, and for more than a year afterward, this patient confined his diet strictly to milk and gingerbread. These articles have constituted the greater part of his diet ever since. He has taken neither fish nor fowl nor meat of any kind. He is accustomed to take, in addition to the milk and gingerbread, rice, oysters, eggs and asparagus. On one occasion he was led to indulge for several days in the luxury of eating boiled green Indian corn. This was followed by a moderate return of the ascites, which disappeared under the use of diuretics. After this experience he resolved to stick to the diet to which he had become habituated.

Case XI.—Case of supposed portal thrombosis. Tapping repeated ten times. Complete recovery.

This patient, a man aged 47, came under my observation in private practice, in March, 1880. His illness began in December, 1880. He was then in Kansas. He was there considered to have malarial fever and inflammation of the liver and spleen. Between December 8 and 27 he had three attacks of næmatemesis and became greatly prostrated. Following this, ascites developed, and œdema of the lower limbs. On February 3, 1881, he was tapped for the first time, and twenty quarts of liquid removed. He was again tapped February 17, and March 2. He was then brought to Hoboken, N. J., and was seen by me, in consultation with Dr. T. R. Varick, of Jersey City. He was tapped by Dr. Varick March 20, April 3, April 14, April 25, May 9, June 6 and July 10. When seen by me before the tappings by Dr. Varick, he was greatly emaciated and prostrated. He was, however, able to take food freely, and notwithstanding the tappings, he progressively improved. A relative informs me by letter, dated May 31, 1883, that he is in better health than for many years before his illness. In addition to the tappings, the treatment by Dr. Varick was tonic and analeptic. He also took from eight to ten minims of the compound tincture of iodine for several weeks.

This patient was and is a total abstainer from all forms of alcohol.

Case XII.—Ascites from fibrous thickening of peritonæum. Eleven tappings, death and autopsy.

A man, aged 50, was admitted into hospital, July 11, 1881. He declared that he was not an habitual drinker of spirit or other alcoholics. Enlargement of the abdomen was first noticed in the Spring of 1878. Jaundice existed at that time. The treatment and progress of the case were not noted in the history. He was in hospital in April, 1879. The abdomen was then considerably enlarged; but the liquid diminished, and he was in a short time discharged. In August, 1879, he was readmitted, and he was then tapped for the first time. He left the hospital, but was again admitted November 28, and between this date and April 12th, he was tapped six times. He then returned to his duty as a watchman, and he did not again enter hospital until July 11th, 1881. The ascites were now great, and he was tapped on July 13th, 1881. The tapping was repeated October 6th, June 2d, 1882, and in October, 1882. Up to this time his general condition had been fair. In November, 1882, it was noticed that he had pleurisy with effusion, and that the abdomen was much distended. The tapping was repeated November 21st, the liquid withdrawn, being, for the first time, sero-purulent. Death, from exhaustion, occurred November 21st, 1882.

The autopsy showed thickening, adherence and calcification of the pericardium. The heart was somewhat dilated, no valvular lesions. The legs were œdematous, and the right pleural cavity contained about two quarts of sero-fibrinous liquid. The left pleural surfaces were adherent, and the pleura greatly thickened.

The capsule of the liver was much thickened, and the organs slightly cirrhosed. The gastro-hepatic omentum was about an inch in thickness, and compressed the hepatic artery and the portal vein. The hepatic duct was situated above the thickened omentum. There was universal fibrous thickening of the peritonæum. Recent peritonitis was shown by the presence of exuded fibrin, and the peritoneal cavity contained sero-pus. The capsule of the spleen was much thickened. This organ was 6 inches in length, 4 inches wide, and 3 inches in thickness. The kidneys had undergone some fibrous degeneration.

A COMPARISON OF ANTISEPTIC AND NON-ANTISEPTIC METHODS IN SURGERY.

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[Read to the Section on Surgery and Anatomy, Cleveland, June, 1883.]

On May 20, when the committee were arranging the programme for this meeting, it was found that there was probably no paper that would directly in-

troduce a discussion upon the comparative merits of surgical procedures undertaken with antiseptic precautions and those undertaken without them. At the request of the local Secretary, I have therefore attempted, in the shortest time possible, to present a comparison of various antiseptic methods with each other, and with non-antiseptic methods.

I think it beyond doubt that, in this country, so-called antiseptic methods are in less favor now than they were a few years ago. This change has become more apparent since the International Congress in London, and depends, to a certain extent at least, upon the favorable statistics produced by Mr. Keith and Mr. Tait in ovariotomy, since they have given up the use of antiseptics. The argument runs thus: If in abdominal surgery it is possible to do away with antiseptics, it must certainly be so elsewhere. Does this argument apply to surgery of other parts? If everything is perfectly clean and aseptic before coming in contact with the abdominal cavity, the only remaining source of infection will be the air. As is well known, the least dangerous source of infection to wounds at the time of operation is the air. Vital tissues have a certain power of resisting septic influences, as is eminently shown in operations on the face. If now, the abdominal cavity does not become infected by the atmosphere, or has sufficient power to resist the germs that may reach it from this source, during the operation, it rapidly ceases to need antiseptic precautions, on account of the rapid union of the peritoneal surfaces.

In this respect, the abdominal cavity differs from the cavities of joints, and from other wounds, since in these there is constant danger of infection taking place from the discharge that may be poured out for days; perhaps for weeks. It would therefore seem that abdominal surgery stands in less need of antiseptic methods than surgery of other parts.

I hope it may be pardoned if this paper is presented from the standpoint of observations made in the clinics of the surgeons whose names are mentioned, and previous observations made while resident house surgeon in the Massachusetts General Hospital of Boston. In the first place, then, with regard to Mr. Keith. He at one time used the spray. Under its use he had 80 successive recoveries from ovariotomy. Later, he had two deaths, which he ascribed to carbolic acid poisoning. Mr. Tait has had 97 successful recoveries out of 100 cases of ovariotomy. Neither operator uses the spray. In October last, however, Mr. Keith said to me: "Instead of being opposed to the principles of antiseptics, I believe in them." One day I saw him remove an immense fibroid of the uterus, largely adherent, without the spray, and a few days later open a perinephritic abscess, with the spray, using carbolic acid dressings. He says he does not use the spray now in operating upon the abdomen, because he fears poisoning, and thinks he has lost cases from that cause. If, however, any operator in the world carries out the principles of antiseptics, it is Mr. Keith. Everything that comes in contact with wounds is cleansed with the utmost thoroughness, and the sponges which he uses he intrusts after operating to no one, but washes them himself, and keeps them constantly immersed in some strongly antiseptic fluid. So far, then, as inferences can be drawn from Mr. Keith's practice, they would seem to be, that in abdominal surgery he considers the danger of infection from the atmosphere less than the danger of poisoning by the carbolic spray. In wounds like the perinephritic abscess of which I spoke, he uses the antiseptic method.

Antiseptic methods may be grouped under three heads, and may be discussed as they are applied by the three men who have been their leading advocates.

Every one has read and heard so much of the minute care, which Mr. Lister takes in the use of antiseptics, that a description of his method would be superfluous. Those who have seen him operate, however, know how rare it is to see an amphitheater in which his precautions are followed with any approach to his perfection.

Let me describe antiseptics as they are applied in a vast number of amphitheaters.

All points of failure may not be present in any one amphitheater, but some defect is very often present. For example, the silk sutures are used dry, or at most, only dipped in carbolic acid. The cat-gut is taken out of its solution and exposed to the air, or, perhaps, hung on the lapel of the assistant's coat. The coats, both of operator and assistant, have been worn in hundreds of operations. Coarse sponges are used which, when out of use lie dry in the amphitheater, and are only washed out in an antiseptic solution before they are used in the wound. The part to be operated upon is simply rinsed off with carbolic acid before the operation begins. Though the hands of the operator and assistant may be thoroughly washed, the surgeons who are invited to examine the wound, simply dip their fingers in the antiseptic fluid, and then place them in the wound, and when dressings are applied they are neither adequate in amount nor applied with sufficient care to prevent the easy access of air to the secretions of the wound. With all these sources of infection, the spray may be kept playing upon the wound with the greatest care, but since this is only intended to prevent infection from the atmosphere, it can by no possibility overcome the infection which may be introduced from any one of these numerous sources.

It seems to me, gentlemen, that right here is the point upon which the conclusions that are being drawn by so many upon the uselessness of antiseptics are at fault. The most prominent feature of Mr. Lister's system being the spray, this was seized upon as the potential element in the securing of the antiseptic healing of wounds, while the other details of the method, which are based upon the absolute cleanliness of everything that is to come in contact with wounds, have been neglected.

That the spray is not a necessity, and that it is the other details that are important, may be shown by a short description of the methods of Prof. Volkmann, of Halle, Saxony, who has been the chief champion of antiseptics in Germany. He secures antiseptics by the flooding of wounds. The floor of his amphitheater is covered with marble, and has an opening

in the center through which water runs away. During operations, the wound is flooded every two or three minutes from a can resembling a watering-pot for flowers, held perhaps two feet above the wound, that the force of the solution of carbolic acid falling upon it may thoroughly wash away any septic matter that may chance to rest upon it. The operator and his assistants wear clean linen coats. No sponges are used that have not soaked at least seven days in 1. to 20. carbolic acid. The ligatures of catgut are only taken from the carbolic oil as they are used. Silk is boiled before use, and kept in an antiseptic solution. The skin covering the part to be operated on is scrubbed thoroughly with soap and water, by use of a nail brush, and ether is often used to dissolve any sebaceous matter that may be collected in the gland openings, and no instrument is used that has not been thoroughly carbolized. When the wound is being stitched together, and can no longer be flooded, a spray is kept playing upon it until the dressings are applied, and also when they are changed. It is but justice to Prof. Volkmann to say that his dressings are applied with a perfection that could scarcely by any possibility be excelled. The excellent results which he reports, and which one can see in his wards, are sufficient guaranty for the efficacy of his method, which succeeds in securing first intention to a remarkable degree, without the spray. The great disadvantage of the method is the fact, that the drenching of the wound with carbolic solution wets both operator and floor, and is extremely disagreeable. Whether Prof. Volkmann may have introduced some new method of operating since I saw him operate in this manner, is impossible for me to say. There remains for consideration the method used by Prof. Billroth, of Vienna.

So far as all precautions in operating are concerned Prof. Billroth's methods correspond almost entirely with Prof. Volkmann's, except that he does not flood wounds so constantly nor abundantly. He does, however, wash them thoroughly. At first he used for washing 1-40 carbolic acid. It is my impression he may now use only water. The essential characteristic of his method is, that in fresh wounds he dusts the wounded surfaces thoroughly with finely-powdered iodoform. In case of sinuses or necroses he places a considerable amount of iodoform in the openings. For dressing wounds gauze is used that is filled with iodoform.

The difference between this method and that of Lester is, that while Lester's might more properly be called aseptic, preventing the entrance of germs into a wound, Billroth's might be called antiseptic, disregarding the entrance of germs into a wound, but destroying them by an antiseptic, which, continuing to act for a long time, constantly prevents any septic process occuring in the secretions.

This method is much less troublesome than either of the others, costing less time and less money, and has the advantage that, should the secretion of the wound leak through the dressings, and become exposed to the air, they are prevented from developing germs by the presence of iodoform, and hence do not demand so careful attention as carbolic acid dressings. The method is of great value where it is impossible by other methods to secure antiseptic measures. For instance, in removal of the tongue it is only with the greatest care and trouble that the floor of the mouth can be prevented from becoming foul, and the operation has proved commonly a very dangerous one from infection not only of surrounding parts, but also of the lungs. After removal of the tongue Prof. Billroth simply packs the floor of the mouth with strips of gauze covered with a preparation of iodoform. This first packing remains often eight to nine days, the wound in the meantime being untouched, and free from all bad odor, and by this means I have seen many cases make a most comfortable and rapid convalesence. The method is equally applicable to operations upon the rectum and the vagina, where other antiseptic methods are impossible, and though the method may not be desirable in all respects it certainly has an especial adaptability to wounds where there is a large septic discharge, to sinuses where complete disinfection is well-nigh impossible, and to surgery in war, where more frequent, and costly, and elaborate dressings would be impracticable. So far as the latter point is concerned, it would seem to be less troublesome than any other method in vogue, even when no antiseptic is in use.

Though a discussion of the merits of other antiseptics than those mentioned might be of interest it does not come within the scope of this paper, and, from the subjects that have been sent to your local committee, I judge a comparison of various antiseptics will be presented by someone else. For the purposes of this paper all antiseptics may be grouped under one of the three heads mentioned. First. Those methods that prevent the entrance of germs to a wound, as represented by Lister. Second. The method of Volkmann, which washes them from a wound while it is exposed, and then so protects the wound by dressings as to prevent germs reaching it. And third. The method of Billroth, which disregards the entrance of germs to the wound during operation, and to the discharges during the process of healing, but destroys their evil influence by the presence of a powder that renders the wound continuously antiseptic.

Other fluids may offer certain advantages over carbolic acid, as bi-chloride of mercury, napthalin, chloride of zinc, or alcohol. Other powders may prove desirable, as subnitrate of bismuth, salicylic acid, or the practice of covering wounds, after disinfection, with bags of powdered peat, but the principle involved in all these dressings is the same as those mentioned.

Whatever antiseptic method is used, it has certain disadvantages. Almost all methods demand much time and attention to details, and expensive dressings.

Should sepsis occur, it is perhaps more dangerous than in open wounds, because germs develop more rapidly in a confined atmosphere than in one where the air circulates freely. Drainage tubes also tend to conduct any poisonous influence to the deepest part of the wounds. The whole system of antiseptics seems to interfere with the ideal method by which

one would seek to gain first intention in wounds, viz., to place wounded surfaces in apposition and keep them so, without the interposition of any foreign substance that would seem to oppose this union.

Those elements in antiseptic surgery which when improperly applied are its dangers, are, when properly used, its safeguards. Drainage tubes which may conduct septic influences to a wound, are, if prevented from so doing, efficient in preventing the accumulation of secretions that tend to delay healing and are, if removed at the proper time, untrustful.

The antiseptic dressings that may favor the development of sepsis, if this is allowed to enter, are, if well applied, a means by which a wound may be kept at perfect rest for days, and exercise a pressure which keeps wounded surfaces closely and constantly in apposition, thus favoring their union, and preventing, in connection of drainage tubes, the collection of discharges. By no means does it seem possible to so fully apply the principle of letting wounds alone after operation as by excluding septic influences.

Some French surgeons, notably Verneuil, have advocated the healing of wounds by second intention, except in cases where this involved too great danger, as in drunkards, or patients with diabetes, arguing that antiseptics introduced too many dangers for the advantages they offer. That carbolic acid and iodoform do under certain circumstances poison and even kill patients is undoubtedly true. It is claimed that certain antiseptics more recently introduced do not possess this danger. This must needs be proved, however, by long trial, since anything that will destroy germs cannot be wholly without effect on organized tissues. That a perfect method of employing antiseptics has not yet been satisfactorily demonstrated is beyond doubt, but as methods are better understood these dangers are more and more avoided, and when one compares the results of treatment of injuries of joints, and compared fractures now with those formerly secured, it would seem that surgical progress should be sought in the direction of the development of the principle enunciated by Lister, rather than in an opposite direction, and that what is needed is to separate the essentials of the method from those things that are not essential.

The theories concerning germs cannot as yet be regarded as settled, but enough seems to be shown to render it probable that their presence in wounds is deleterious. If the dangers which have been ascribed to them arise from some other cause, this has not yet been demonstrated.

In conclusion then, it would seem: 1. That the fact that operations on the abdominal cavity succeed without the spray, does not influence the employment of antiseptics with regard to other operations where there is a continued opportunity for infection. 2. It would appear that the spray is the least important of all the details in antiseptics, and that if the other details already mentioned are attended to, the proper dressing of wounds, pressure and drainage, may by securing absolute quiet for a wound, turn danger into benefits. 3. That different methods are of different application, and that whereas the spray might be most desirable in opening joints, and in the atmosphere of hospitals, with bad hygienic surroundings, flooding might be equally efficient in certain other wounds, and that some perminent antiseptic as iodoform would be most servicable, when other antiseptics are inapplicable, as in removal of the tongue, or where there are cavities that can be rendered aseptic only with difficulty, as in sinuses and necroses, and that some such permanent antiseptic would be of incalculable benefit in war where frequent and elaborate dressings either antiseptic or non-antiseptic are impossible. And 4. That although there are certain dangers in the use of antiseptics, these are more than equaled by the dangers attendant upon their omission, especially in large hospitals, and that dangers of poisoning are certainly decreasing as the application of antiseptics is becoming better understood, and further that investigation may develop a method of securing aseptic results less onerous, and devoid of the disadvantages that now surround them.

If it might not be out of place to make a personal observation, I would venture to say, that after a very careful study of the various methods employed in surgery, both antiseptic and non-antiseptic, as applied in the clinics of a large number of the most esteemed of living surgeons, it has seemed to me that the various antiseptic methods secured far better results than other methods.

I hope, gentlemen, you will pardon me for the seemingly dogmatic manner in which the statements in this paper have been advanced. They have been thus presented only that in the shortest space possible this subject might be brought before the convention for discussion, and if the paper should succeed in eliciting from the many men here present, who are so eminently qualified to instruct the profession at large, their opinions upon a subject which is fundamental in all surgical procedures, it will accomplish the sole purpose for which it was written.

NASAL DISEASE A FREQUENT CAUSE OF ASTHMA.

BY JOHN O. ROE, M. D. ROCHESTER, N. Y.

[Read in Section on Ophthalmology, Otology and Laryngology, June, 1883.]

It has become a well-known fact, since it was first pointed out by Valtolini, that polypoid and other growths in the nasal passages are the frequent cause of asthmatic attacks; but it is only since Weber called attention to the relation between chronic nasal catarrh and asthma that it has been recognized, that other diseases of the nasal passages, independent of neoplastic growths, are also capable of exciting asthmatic attacks in a similar manner.

Asthma is proverbially considered to be the most intractable of all diseases. Indeed, so uncertain is the effect of any remedy in its treatment, in different individuals, that physicians not unfrequently depend more on the experience of the patient respecting any particular remedy than upon the logical administration of remedies to meet the symptomatic indications.

This capriciousness of asthma has led to the most diversified views as to its etiology and pathology,

which to the present time has been the most imperfectly understood of any disease with which we are so familiar. Since the time of Laenneck, numerous theories have been proposed to explain the cause and phenomena of the disease, but none have met with more general acceptance than the one proposed by Laenneck himself, that asthma is a neurosis, and depends on either a functional or an organic change in the nerve centers, producing a spasm of the bronchial muscles, and consequent narrowing of the tubes during the attack. This theory of the nervous origin of asthma is founded mainly on the assumption that diseases which cannot be traced to organic lesion, are manifested in symptoms of derangement of the nervous system.

This view of the cause of asthma, supported by Andral, met with general acceptance, but the negative evidence on post mortem inspection, led to seeking another cause.

Louis observed the exudate which followed the attack, and its frequent association with emphysema and bronchitis. He therefore considered asthma to be a consequent symptom of these affections.

Dr. C. J. B. Williams, supported by Longet, proposed that the disease be divided into two forms—the spasmodic and the paralytic; the former accompanied emphysema, while the latter appeared in connection with chronic pituitous catarrh.

Traube and Villemin, not satisfied with these theories, attributed the dyspnœal attacks to fluxionary hyperæmia of the bronchial mucous membrane.

Tetanus of the diphragm and other muscles of respiration, accompanied, perhaps, by a spasm of the glottis, was then proposed by Wintrich, and supported by Budd and Duchenne, while Sée insisted that asthma is a neurosis of the vagus and its branches, and manifested itself by a tetanus of all the respiratory muscles and by a bronchial expectoration.

Dr. Burdon-Sanderson proposed that relaxation of the vocal cords and narrowing of the chink of the glottis during profound sleep, accounted for the asthmatic attacks at night.

Leyden considers asthma a form or symptom of croupous bronchitis.

And lastly, we have proposed by Weber, and supported by Haring, that the disease is a vaso-motor neurosis. The fluxionary hyperæmia proposed by Traube is thus produced by the vessel dilatation caused by irritation of the vaso-motor nerves. The fact that hyperæmia and swelling of the bronchial mucous membrane take place, was confirmed by Störk, who demonstrated by laryngoscopic examination the congestion of the trachea during the attack.

In reviewing, even thus briefly, the different theories regarding the pathology of this affection, which have from time to time been proposed, we cannot fail to observe that the influence exerted by the sympathetic system of nerves had been entirely overlooked, until pointed out by Prof. Weber.

This is still more singular, since it was so well known that derangement of various organs and disease of various parts of the body would provoke attacks of asthma, and it was also known that disease in one part or organ will cause, through the agency of the sympathetic nervous system, derangement in another organ, even in remote portions of the body.

Before discussing the special affection forming the subject of this paper, I will enumerate, in passing, some of the varied reflected phenomena, observed to result from disease in the nose, and manifested in nervous disorders—as chorea, reflex epilepsy, neuralgia (especially of the supra-orbital nerve), melancholia, loss of memory, and mental depression. This relationship which exists between the nasal mucous membrane and the nervous system, has been very clearly formulated by Dr. Jocobi, in a recent communication to the New York Obstetrical Society, on some of the effects of nasal polypi in children, as follows:

First. The trigeminus, with all its branches, is subjected to direct or reflex irritation arising from the inflamed condition of the nasal mucous membrane.

Second. The thickening of the mucous membrane in the narrow passages of the child, and especially the presence of a polypus, seriously interferes with respiration, and the result is the accumulation of carbonic acid gas in the brain, particularly about the respiratory center at the medulla oblongata.

Third. The lymphatic system of the nasal mucous membrane and that of the dura-mater and the arachnoid membranes are in intimate relation with each other, which is so close that they can be injected from either side.

Disturbances are also seen to take place in other organs, and will only disappear on the removal of the cause in the nose. Among these may be mentioned diseased conditions of the upper part of the digestive tract and gastric disturbances, uterine disorders, affections of the genito-urinary organs, disorders of sight, smell, taste and hearing; affections of the larynx, laryngeal cough, and alterations in the speaking and singing voice.

With this array of affections, unquestionably and not infrequently induced by nasal disease, it is not surprising that organs so sensitive as are the lungs to external impressions, should readily be irritated by similar causes.

There are two modes in which nasal disease provokes attacks of asthma.

1st. The most frequent form results from narrowing or occlusion of the nasal passages by hypertrophied tissue or nasal polypi.

2nd. That induced by disease of the pituitary mucous membrane unassociated with hypertropy or polypi.

The first is both mechanical and nerve-reflex in its character, while the second is purely reflex.

It is a noticeable fact, that nasal polypi and hypertrophied tissue, when inducing asthma, are almost invariably located on the posterior end of the turbinated bone.

This sensitive area of the turbinated tissue at the posterior end of the turbinated bone, Dr. J. N. Mackenzie, of Baltimore, likened to the sensitive cough centers found in the pharynx and larynx.

The more frequent occurrence of asthmatic attacks at night, especially in those persons having hypertrophic catarrh, is by this fact very clearly explained.

At the posterior end of the turbinated bone, the cavernous erectile tissue is much thicker and more dilatable than at the anterior, consequently, when in the recumbent position, the gravitation of the fluids distends this portion of the tissue, which, together with the accumulation of the secretions, occlude the passage, produce pressure at this sensitive point, and reflex irritation in the lungs results. This irritation is reflected to the lungs through the cervical sympathetic, connecting the pneumogastric nerves with the trigeminus, which has extensive distributions in the nose.

The mechanical effect of occlusion of the nares cannot be better illustrated than by the marked dyspnœa, which is occasioned in young children if by any cause the nostrils become obstructed.

From a number of well-marked instances of asthma, caused by nasal disease, independent of polypi, which have come under my observation, I will cite the following, by way of illustration: A lady, age 40, consulted me in regard to attacks of asthma, which were increasing both in frequency and severity. She had had asthma more or less for several years, but more since the birth of her last child, three years before. She was subject to frequent colds in the head, which almost invariably induced an attack of asthma. On examination, I found an irritable chronic rhinitis with some pharyngo-laryngeal and bronchial catarrh.

There was some thickening of the nasal mucous membrane, which was very sensitive, but there was little or no turbinated hypertrophy, nor were her attacks to any extent aggravated at night.

Local applications to the nasal cavity, and sedative and mildly astringent inhalations, soon relieved and lessened in frequency her asthmatic attacks. These, soon after, ceased altogether, and she has had none during the three years since, even on taking cold.

A girl, æt. 18, was referred to me suffering intensely from dyspnœa of an asthmatic character. From the character of her respiration, I suspected some laryngeal obstruction. On laryngoscopic examination, the larynx was found clear, so were also the lungs, except some narrowing of the smaller tubes. There was no mucus in the tubes or expectoration. The nostrils were both found occluded—the right by hypertrophied turbinated tissue, the left by bony obstruction.

The hypertrophied tissue in the right was removed by Jarvis snare, and the bony obstruction of the left by nasal bone scissors. The passages were freed from obstruction and her asthma disappeared.

In about three months she returned with her asthma as severe as before. On examination, I found in the left nostril that granulations from the site where the bone was removed had formed a band across the back end of the passage, but it did not obstruct nasal respiration. On the removal of this band the asthma disappeared.

Several other equally well marked cases have come under my observation. I will not detain you with a recital of them here, but will add them to this article should it be published.

In the *Edinburgh Medical Journal* for February, 1881, Dr. S. Hunter Mackenzie reports a case in which asthmatic attacks were caused by atrophic catarrh of the nasal passages. He also says the attacks were worse during August and September, and were entirely relieved by treatment to the nose.

The fact that they were worse during August and September would indicate the cause to be a local irritant, as is the case with hay asthma sufferers.

In hay asthma sufferers the cause for the acute attacks lie in a hyperæsthesia of the turbinated tissue, which hyperæsthesia is caused by a chronic rhinitis (usually hypertrophic) that renders the tissues extremely sensitive to pollen and other irritating substances floating in the air, as the writer of this paper has recently pointed out in an article on hay fever in the *New York Medical Journal*.

This relationship between chronic rhinitis and asthma has also attracted the attention of several recent writers on nasal diseases.

B. Fraenkel considers the treatment of the nose of the utmost importance for the relief of asthma associated with nasal catarrh.

Schaeffer believes that all asthma patients suffer more or less from chronic catarrh of the upper air passages, particularly the nose.

Bienner and Riegel consider the nasal fossæ a very frequent center of irritation in the production of reflex asthma.

Dr. Elsberg, of New York, has very clearly called attention to the same fact in a recent article before the American Laryngoscopic Association.

Brisgen, in a very excellent article in the *Klinischen Vorträge* for May, 1882, points out in a forcible manner the important relations which disease of the nose sustains to spasmodic asthma.

He also calls attention to the importance of free nasal passages and of free nasal respiration, of the baneful habit of mouth breathing, and of the universal attention which should be given to the treatment of nasal disease and to the Englishman's proverb, "Shut your mouth and save your life."

DISCUSSION.

Dr. Seiler in the discussion said that he fully agreed with the author and that in one case an attack of asthma has been produced by touching a tender part on the nose with the end of a probe, and all asthmatic symptoms disappeared after the spot had been cauterized. He also, was of the opinion that hay fever was due to chronic nasal catarrh of the hypertrophic variety and that the mucous membrane becoming irritated by the pollen grains, gave rise to the well-known symptoms. He had cured cases of hay fever by removing the hypertrophic catarrh.

Dr. Frothingham said that he could not see how an inflammation of the nasal cavity could exist for any length of time without a tendency to extend into the mucous membrane of the bronchial tubes and that then these cases were not different from ordinary cases of the disease.

Dr. Roe in closing the discussion, said he was very glad that Dr. Seiler had supported him in his opinion. He also said it was not necessary to have

bronchitis in all cases of asthma, but that the congestion of the mucous membrane of the bronchial tubes might readily be produced by the samé causes which in the beginning produced asthma.

IS ABSCISSION A PROPER OPERATION?

BY JULIAN J. CHISOLM, M.D., OF BALTIMORE, MD.

[Read in Section on Ophthalmology, Otology and Laryngology.]

A question which often intruded itself upon me when carrying out the suggestions of Mr. Critebek, was as to the propriety of removing the staphylomatous tumor and leave the bulk of the eyeball behind. This operation I have for many years abandoned, for the reason that I questioned the advantages supposed to attend the leaving of a part of the eyeball to facilitate the movement of the artificial eye shell. It is difficult to divest one's self of the idea, that a round, plump, symmetrical stump, is not essentially adapted for the application of an artificial eye, itself the section of a hollow sphere, which seems to invite into its open concavity a corresponding spherical surface. It seems to be a natural inference that when two surfaces are nicely adjusted they should work well together. However true this may be in joint movement, it must not be forgotten that such sliding movements are not wanted in the application of an artificial eye upon an eye stump. In this case there should be no motion between the opposing surfaces and yet a nice adjustment is always aimed at.

It is no easy matter to remove a general staphyloma and leave a symmetrical globe behind. The elliptical incisions necessary for amputating the corneal prominence wholly, leave sharp points or puckered ends to the cicatrical line, and these form ugly prominences against which the artificial eye presses injuriously. With a certain amount of friction which seems unavoidable, the movements of the eye shell against the irregular surface of the stump induce irritation, and these stumps are kept in a constant state of injection. When the irritation is daily re-excited by the presence of the artificial eye it leads to excessive mucous secretions and a thickened condition of the conjunctival surface, accompanied by an irritability of the socket, which often is so excessive as to exclude the possibility of wearing the artificial eye with any comfort. I find as the result of my observation that this train of symptoms are much more common when an artificial eye is worn over a stump than when carried in an eyeless socket. An explanation for this seems to reside in the much more limited contact of the shell when the eyeball has been entirely removed.

Should two sockets be compared, one holding an eye stump after a successful abscission, the other from which the eyeball has been properly removed, it will be noticed that the motions imparted to the socket tissues by the muscles caught in the cicatrix will be co-extensive with those moving the eye stump; but dissimilar in this regard, that while the eyeball rotates in the orbit with but little movement of the socket tissues, the muscular action upon the eyeless socket makes an irregular form of curvature as each muscle in turn pulls the socket tissue backwards, this depression being accompanied by a corresponding elevation of the surface over the location of the antagonistic muscle. When an artificial eye is adjusted to an abscissed globe nearly the entire opposing surfaces are in juxtaposition, the edges of the artificial eye overreaching the ocular boundaries and lodging against the socket conjunctiva, so that when motions are made by the muscles upon the eye stump and are transmitted by juxtaposition of surfaces to the shell, there must necessarily be some sliding or friction on account of the overlapping of the eye shell, the periphery of which rests upon resisting tissues to which but little movement is imparted. When an eye shell is adjusted to an eyeless socket, which exhibits a slight concavity instead of the eyeball convexity, only the very edges of the artificial eye touch the socket tissues so that friction of opposing surfaces is reduced to a minimum. The edge of the artificial eye rests on the lower conjunctival sulcus, and if of proper size should not press the upper conjunctival cul-de-sac. The variation of position in the plane of the socket as the cicatrix is acted upon by the recti muscles tilts the artificial eye in such a way as to establish movements which will be symmetrical although not co-extensive with those of the good eye. If the movements imparted to an artificial eye by the socket tissues be coequal with those distributed by an abscissed eyeball while the effects of injurious friction are materially reduced, the immediate and ultimate dangers of preserving a part of the eyeball, as a cushion, under the belief that it offers advantages for the adaptation of an artificial eye, are too great to justify the operation of abscission. Enucleation may be considered one of the easiest and safest operations in eye surgery. The after-healing is prompt and the operation is final. Abscission, on the contrary, necessitates much experience and skill in the use of instruments to meet all of its requirements for obtaining a symmetrical stump. Destructive inflammation may be the immediate sequela of a most perfect operation. Should the patient escape this peril and the wound heal kindly the eyeball may at any future time become the seat of degenerative changes necessitating enucleation to avoid sympathetic irritation, and these may occur whether the ciliary region be injured or not, during the operation. When we weigh the difficulties and dangers immediate and remote of abscission, with the simplicity and safety of enucleation, with the belief that one has no advantages in moving the artificial eye over the other, then may abscission be rejected as an eye operation.

DISCUSSION.

Dr. Culbertson said that in an experience of over thirty years, and embracing by no means a limited number of cases, he had not observed a single unfortunate result from abscission of the eyeball. This favorable showing was probably due to several causes, as follows: The abscission of the cornea and sclerotic one-sixteenth of an inch posterior to the sclero-corneal junction, thus removing the sentient extremities of the ciliary nerves and sensitive cornea, and permitting the escape of the crystalline lens (in one case

he had removed the detached and shrunken choroid, retina and vitreous, with favorable result); the removal of the iris; the rejection of sutures in the sclerotic to act as irritants, and which, closing the eyeball, aid in increasing the tension and the pain, thus leaving an open wound, that drainage from the eyeball may follow, as well as suppuration of its contents (Von Graefe having shown that when this follows sympathetic inflammation of the fellow eye does not obtain), and permitting these to return to the embryonal state mentioned by Stricker as the result of inflammation, and the whole process ending in the formation of a firm and non-sensitive cicatrix in the anterior region of the shrunken eyeball, on which rests the artificial eye in the future; and the use of disinfectants in the conjunctival sac, conjoined with cleanliness after the operation.

His patients were, as a rule, sitting up in three or four days, and convalescence has been uninterrupted. He had not observed flattening of the side of the face in children, or so much as a sulcus above the eyeball, following this, as after the operation of enucleation. He believed, too, that abscission permitted greater movements of the artificial eye. He cited also the fact that artificial eyes are worn often with impunity without the removal of the cornea or any preparation of the eyeball.

He would not abscise when sympathetic inflammation was present in the fellow eye, or when there was a foreign body in the affected eye.

Dr. Frothingham said that the operation of abscission should be abandoned and that the uninjured eye should be the objective point in a case of injury to it by sympathetic inflammation no risk should be incurred for the sake of æsthetic considerations. Further, that the operations prove more difficult to perform than enucleation and therefore the risk is greater. The stump is always a source of danger even after the lapse of years.

Dr. Lundy, of Detroit, had seen cases of total blindness from sympathetic ophthalmia after abscission. Thinks the wearing of an artificial eye over these stumps often produces great irration. Had seen a case of ossification of the ciliary body and choroid as a result of irritation from the wearing of an artificial eye over such a stump.

Dr. Thompson, of Indianapolis, coincided most fully with the views expressed by Dr. Chisolm, and mentioned several cases of panophthalmus following abscission and two cases occurred under his observation where two formerly healthy eyes were sacrificed and vision totally lost after the operation of abscission.

Dr. Conner said he had seen disastrous results following the operation of abscission.

Dr. Noyes said he had formerly performed the operation, but had never seen bad results to follow; in all these cases he had however advised enucleation of the eye. He thought that suppuration prevented sympathetic inflammation in the other eye. In cases of foreign body he should always advise enucleation and thought that the safety of the uninjured eye was the main point.

Dr. Cornwell, of Columbus, described an operation for enucleation devised by himself which had proved very successful.

Dr. Chisolm, in closing the discussion, said that formerly he had been in favor of abscission, but that now he considered an injured eyeball, whether from operation or from accident, a source of great danger.

EARLY TREPHINING IN DISEASES OF BONES.

BY JOSEPH RANSOHOFF, M.D., F.R.C.S., ENG. PROFESSOR OF DESCRIPTIVE ANATOMY AND CLINICAL SURGERY, MEDICAL COLLEGE OF OHIO.

[Read to the Section on Surgery and Anatomy, June, 1883.]

A careful study of the vascular relations of a bone to its periosteum and medulla, leads to the conviction that there can be no serious deviation from the normal in either without implication of the remaining parts. Of the three component parts of a bone, the osseous tissue proper, owing to its comparatively passive nutritive state, is naturally least liable to inflammatory changes. As a rule, its morbid conditions are therefore secondary in character, and follow upon disturbances of the periosteum or medulla. From the superficial position of the former, its lesions, whether primary or secondary, are always easily recognized. Those of the medulla, on the other hand, are as usually ignored until the periosteum and the bone itself have become involved in a manner to attract attention by irregularities of outline, swelling of the soft parts, abscesses and fistulæ. It is for this reason, that periostitis is supposed to be the most common affection of bone, although there are most excellent grounds for the belief that, in the great majority of cases, the marrow must be looked to as the seat of the first pathological process. Concerning the destructive lesions of the articular ends of the long and of the cancellous tissue of the flat bones, this is universally conceded. What anatomical or physiological factor can be adduced to explain the difference which is supposed to exist in the course of inflammatory changes as manifested in the epiphyses and diaphyses of long bone? For my part, I fail to recognize one. Indeed, there are many persons for holding that most cases of periostitis, whether consequent upon trauma or arising without discoverable cause, are secondary to endosteal lesions. In the first place, it is a well-established fact in pathology, that the tissues which possess the greatest vascularity, and therefore also display the greatest nutritive activity, most readily yield to inflammation. This is likewise true of those tissues in which the greatest number of changeable connective tissue cells are found, for these most readily assume their embryonal form and activity, whence they are only one step removed from pus globules. In regard to both of these factors, the marrow, particularly of growing bone, and especially in the vicinity of the epiphysal cartilages, must be considered as more prone to inflammation than the periosteum.

Again, it is within the experience of every observer, that intense pains in a limb, with uselessness of the member, will often precede by weeks and even months the development of perceptible changes in

the contour of the bone. Furthermore, under such circumstances, the mere incision of the periosteum, however freely made, will very often fail to relieve the pain effectually, even if pus be evacuated by the operation. Again, this pus, as was shown by Chassaignac and by Rosen, frequently contains a notable amount of oil globules which could only have come from the medullary cavity. The periosteum itself is free from fat, and the oily appearance of the surface of a bone after it has undergone post-mortem changes must not be mistaken for its appearance *intra vitam*. If subcutaneous bones like the tibia and clavicle are altered by inflammatory processes, it can easily be demonstrated that generally the entire circumference of the bone is involved simultaneously, so that if only a section is invaded by disease, the part will assume a spindle shape. The peculiar osseous changes that follow in the wake of constitutional vices like the tubercular and hectic, are of course not here included. Of greater importance than either of these, is the fact that whatever the bone affected, extensive sequestra are central in character and position, and can only be removed by mechanically destroying in part the laminæ that are of periosteal development.

Of inestimable value in the appreciation of the events that lead to the destruction of bone is the fact, that depriving it of its external covering is not productive of exfoliation. This does not require experimental proofs. While an interne of the Cincinnati Hospital I saw the frontal bone denuded over an area larger than the palm of the hand by an attempt at suicide; the periostum with the soft parts sloughed away. On the fourth day we could observe with a lens the minute capillary loops springing from the depths of the bone and spreading until they touched and the entire wound was filled with granulations. Even if in analogous cases necrosis does ensue, the process is limited in extent and only the superficial lamellae are thrown off.

The unyielding bony case that everywhere surrounds the medulla is an *a priori* evidence of the great gravity of the pathological changes here situate. When an inflammatory exudate rapidly fills the endosteal space its organization is almost impossible. The increased intra-osseous pressure forces serum and corpuscles through the Haversian canals, the periosteum is raised and thus deprived of its internal and external sources of its blood supply, the death of the bone necessarily ensues. The greater importance which I would attribute to the pathological conditions of bone marrow has been recognized by a small minority of observers, especially by Rosen, in Germany, and Lannelongue, in France. Nevertheless, the view is still entertained by the profession at large that except in the acutest cases of osteo myelitis, as first clearly described by Chassaignac, the periosteum plays the more important role. The study of pathological specimens derived from human subjects can give strength to neither of these views, since death does not ensue until the lesions have long passed from their primary form and parts originally not at all involved have suffered death from interrupted nutrition.

Fortunately experimental pathology aids us in filling up the gap in our knowledge of bone lesions. I need not consume your valuable time in recalling the experiments which have been made relative to this subject, chiefly by Flourens, Ollire, Busch, Mass and Kocher. It has been generally proven that the opening of the medullary cavity, even with extensive destruction of the marrow is not necessarily followed by general disturbances nor even by increase in the thickness of the bone. Kocher lays considerable stress upon the antiseptic precautions which should be observed to prevent septic changes. In my own experiments I have not been enabled, as a rule to carry them out, since the animals would remove the bandages acting on the belief that their own saliva was a better application to the wound than either iodoform or boracic acid. Dogs, from which I removed large portions of the humerus without interrupting the continuity of the shaft in its entire thickness, would run about on the second day after the operation without more than a just preceptible lameness. Of course these wounds suppurated, in one case for six weeks and in another two months, but without leading to the exfoliation of bone. Whoever will experiment upon this theme will readily convince himself that even an extensive purulent exudate in the central canal does not, of necessity, entail the death of bone, unless the inter-medullary pressure is sufficiently increased to cause regurgitation of the blood in the vascular channels and of the exuded material itself back towards the periosteum. The deleterious effects of any great increase of intra-osseous pressure on the circulation of the bone can be most easily demonstrated on the long bone of any young animal in which the marrow has not yet undergone post-mortem changes. If through the small aperture made by a drill in the diaphysis of a calf's tibia, only one ounce of fluid be injected the blood will at once be observed to regurgitate from the interior of the bone throught the Haversian canals towards the periosteum and particularly through that of the principal nutritive artery. While I have never been able by this process to elevate the periosteum from its attachments, it explains to me satisfactorily how, in all cases, this membrane becomes secondarily involved; how in the acutest the excess of blood to its deeper and most cellular layers will lead to suppurative action and how in milder cases by hypertrophy of the bone will follow this interruption in the harmony of the osseous nutrition. In no way has the relation between medulla and even the general circulation been displayed better than by the experiments of Busch and Riedel on the subject of fat embolism, who have been able to induce capillary embolism of the pulmonary vessels by injections into the medullary space.

The question might now be properly raised, whether all the detrimental changes, both local and general, encountered in cases of osteo-myelitis are the result of the increased medullary pressure. In subacute and chronic inflammations of bone, where the intra-medullary pressure has been gradually elevated, the osteo-porotoic condition of the bone in the vicinity of the inflammatory nidus is of itself sufficient evidence of the effect of said pressure. As has al-

ready been seen, the destruction of the medulla, whether produced by hot wire or chemical agents, will not as a rule lead to nurosis, or even to marked thickening of bone and secondary changes in distant parts, I have never seen produced, provided an efficient means of escape be given to the inflammatory exudates; provided, in other words, the possibility of exaggerated tension in the canal be removed. Prevent the escape of the excessive outpouring of blood, and serum and leucocytes from the inflamed nidus, and disastrous local and general phenomena supervene at once. I did not find it necessary in order to obtain these to resort to such violent, and, I might be permitted to say, unnatural methods as the introduction of laminaria tents, chemical irritants plugs of charpie (Busch, Troja) or of septic virus. The extensive breaking down of the marrow through drill-holes, and the subsequent stoppage of these with wooden pegs in two experiment animals resulted in the one case in profuse purulent infiltrations of the soft parts with death of the entire thickness of the bone, and in the other case in the death of the animal on the seventh day from embolic processes in both lungs. The specimen derived from this animal was of particular interest, in that the post mortem investigation displayed at least twenty hæmorrhagic infarcts in the lung at a time when even the medullary cavity as yet was free from pus, although it contained shreds of medullary tissue. In a third animal the medulla of the humerus was likewise destroyed through two drill-holes, only one of which was subsequently occluded. While in this case profuse suppuration ensued, there was no evidence whatever of general infection, or even of necrosis up to the end of the fourth week, when the animal made good its escape.

To the practitioner who sees many cases of compound fracture, experiments such as these will probably only serve to explain the fact that purulent infiltration of the soft parts, septic complications and extensive necrosis is less liable to follow in cases where the injury itself has provided means of drainage than in those in which a small cutaneous wound is attended by extensive comminution of the bone.

The facts which I have attempted thus briefly to elucidate indicate, as has already been remarked, to the minority of pathologists the secondary role of the periosteum and the great importance of the medulla not only in the acutest forms of spontaneous and traumatic osteo-myelitis that lead to speedy death by purulent infection, but also in those milder types of bone disease in which the end results are necrosis, often, of an entire diaphysis, breaking down of the epithelial disk, articular complications, and eventually death from amyloid degeneration of the viscera.

If the two propositions (1. That the exposure of the medullary cavity *per se* is unattended by deleterious consequences, and 2. That the continuance of increased intra-osseous pressure is the main source of secondary changes) are correct, the natural deduction follows that in the very earliest possible use of the trephine we possess an inestimable means of saving life in the acutest forms of bone disease, of curtailing by months and even by years the course of others, and of preventing the deformities and operative mutilations that so often follow in the wake of even mild cases.

As was already recognized by Chassiagnac, the only relief from local, and often from general death, in the severest types of medullitis, is in the spontaneous formation of an aperture for the vent of the purulent accumulation Nevertheless, he and his followers obtained from operative interference, although the ancient operation for trephining in bone disease so long abandoned, had been reintroduced by Petit, Hunter, and our own countrymen, Drs. N. and T. Marven Smith. While in the most violent osteo-myelitides, the typhus des membres, trephining the bones involved is particularly essential to the preservation of life and limb, it is not here that the operation must find its widest range of application and usefulness, for idiopathic cases that run so rapidly fatal a course, are among the clinical varieties. It is in the sub-acute and chronic inflammations of bone that are of daily occurrence, and that lead secondarily to necrosis or osteo-psoriosis and sclerosis, from long-continued vascular disturbance of the medulla of the bone proper, and of its external envelope that the operation of early trephining is attended with its most signal benefits.

While most modern systematic writers speak with praise of the use of the trephine in the treatment of bone affections, such phrases as if the presence of pus be suspected, or "if the pain is not relieved by an incision" are probably too often encountered in our classical treatises on surgery, for they necessarily deter the timid from timely interference. The latter, is even counselled by Dr. Lidell, than whom there is no greater authority living, on the subject under consideration. Among German writers, Deume, Volkman, Licke and Roser, discuss the propriety of early interference with the trephine, but none of them had given the operation a trial. It remained for the valuable contribution of Ollier, with its report of nineteen cases, to give that impetus to the procedure to which its merits justly entitles it. Within the last five years Mr. Bryant has recorded twelve cases. M. Lannelongue three, Mr. Downes 5, Dr. Bauer 1, in which the early opening of the medullary cavity for diverse affections was practiced with good results, and without causing untoward symptoms referable to the operation. In my own experience, I have within two years felt impelled to resort to the use of the trephine in three cases of inflammation of the shaft of a long bone, and in all of them the relief afforded was as prompt as it was radical.

Case I. Michael J. æt. 8 years, had received a kick on the shin in July, 1881. The pains of which he complained were unheeded for several days, when the inability of the patient to walk, aroused the anxiety of the parents. The physician who first saw the case, ordered applications of iodine and rest. When the patient was presented at the dispensary of the Medical College, of Ohio, two weeks after the accident, he could bear no weight on the affected member, and complained of pains, which, of course, were particularly severe at night. Inspection revealed considerable swelling of the entire leg, the skin of which was greatly discolored by the previous

applications. The part was so sensitive to the touch that its satisfactory examination could only be effected under anæsthesia. Through the swelling of the soft parts, the outlines of the tibia could be distinctly felt. The middle third of the bone was thickened in its entire circumference so far as this could be palpated, and presented a long spindle, the ends of which gradually merged into the normal outline. After demonstration of the case to the class, a free incision was made down to the bone, and the periosteum divided for about an inch. Not a vestige of pus appeared, and while the bone-membrane in the wound appeared thickened, it was firmly adherent to the subjacent structure. The relief from pain which followed this treatment was most marked for nearly one week, when, although the wound suppurated freely, and the infiltration of the soft parts had to a large extent subsided, the acute symptoms returned. For this reason I concluded to open the medullary cavity, and on about the twenty-third day after the inception of the difficulty I trephined. When the button of bone was removed, several of the by-standing students believed to have recognized several drops of pus exude with the blood from the medullary space. I did not see them, and their presence or absence could have had no effect on the justifiability of the second operation. In six weeks the ganulations which filled the oseous aperture were on a level with the skin, and in three months the patient resumed his desk at school.

CASE II.—Fred S., æt. 7. The child of healthy parents. Referred to me by Dr. Little, of Cincinnati. Two months prior to my first examination of the patient, a severe pain developed in the left tibia, without any other appreciable cause than a severe drenching. Notwithstanding the nocturnal exacerbations of suffering, the disease was supposed to be of rheumatic character, and the exhibition of iodide of potassium and the use of the rubber bandage, appeared to be of marked benefit. In August, 1882, three months after the inception of the difficulty, the entire leg presented a glistening, rosy-red appearance. Pressure over the tibia was particularly painful over the points of junction of the middle with the upper and lower thirds of the shaft. The entire tibia was considerably thickened, when compared with the sound one. Recognizing the extensiv e nature of the affection, and believing it to be cen tral in its origin, I concluded, after consultation with Dr. Little, to trephine the bone at two points, and for this purpose selected those of greatest tenderness. At the points indicated, the periosteum was normal in appearance, although at the upper part the surface of the bone was roughened over an area not exceeding the fourth of an inch. It was not necessary to resort to the trephnie, for I was enabled, with a sharp spoon, to cut a way into the medulla without the least difficulty, so vascular was the compact tissue of this bone. Where this instrument can be used, I think it should be preferred to the trephine, since the aperture made by it can be changed in form at the will of the operator, and no irritating bone-dust is forced into the medulla. In this case, a small quantity of pus escaped only from the upper aperture. On the fifth day after the operation an erysipelas developed, which involved the entire extremity, and required the opening of several abscesses. This complication did not materially interfere with the cure of the boy, for three months after the operation, he again attended school. Although a just appreciable enlargement of the tibia still remains (nine months after the operation) the boy complains of no pain, is not easily fatigued, and in every way enjoys perfect health.

CASE III.—Miss P., æt 16. Suffered from severe pains in the left clavicle, for which medical aid was summoned. The history of the case is not very clear. When I saw the patient in October, of last year, she was pale and unhealthy in appearance, and had ceased to menstruate. The left clavicle was very much thickened, but not very painful to examination. About its center there was a small periosteal abscess, which, when opened, discharged a small quantity of pus. I was not enabled to find a sinus leading to dead bone at this examination. The continuance of the discharge, led me to expose the diseased bone. With the assistance of Dr. L. J. Crouse, of Cincinnati, I found a very small sinus leading into the medulla cavity. With the chisel, I removed a portion of the anterior clavicular wall, and succeeded in extracting a sequestrum, three inches in length, and of perfect form. About its central origin there could be no reasonable doubt. Unfortunately, the welfare of the patient, demanded that the specimen should be ruined, before it was brought to light. While there was no delay in the permanent closure of the wound, the deformity, consequent upon the periosteal growth of bone around the necrotic mass, has not been in the least modified.

In neither of the cases reported did I seek or obtain union by first intention. Had this been accomplished, the operations might justly be called but an exaggerated "*saigner des os*, bleeding of the bone," suggested by Langier before many of us were born. The object of early trephining is to afford a means of exit to the inflammatory exudate as fast and as long as it is found, and hence the circular aperture will always be followed with better results and attended with less risks than the linear osteotomy so highly lauded by Mr. Erichsen. Where the entire diaphysis of a bone is involved, I believe it is always best to trephine in at least two places, with the view of equalizing pressure and for readier drainage. In 1839, Marcus Smith already reported a case in which the symptoms were not relieved by two apertures. Finally, the removal of a third button of bone from the head of the tibia was followed by permanent alleviation.[1]

I have intentionally refrained from mentioning the osteo-myelitis that results from septic infection in cases of compound fracture, gunshot and amputation wounds, as a subject beyond the scope of this paper, and entirely irrelevant to the material embodied therein.

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[1] The after-treatment in my cases consisted of the filling up of the wounds with Mason's boracic acid, and the application over this of absorbent cotton and the ordinary roller bandage.

PLACENTA PRÆVIA, OR TWO CASES OF CENTRALLY IMPLANTED PLACENTAS IN SUCCESSION.

BY D. C. DAVIES, M.D., COLUMBUS, WIS.

[Read before the Wisconsin State Medical Society September 15, 1883.]

By placenta prævia we mean the real position of the placenta and placental seat, it being situated over some portion of the lower segment of the uterus instead of at the fundus or side walls of that viscus. When the placenta is implanted so as to completely cover the internal mouth of the womb, it is called placenta prævia centralis, but when it only dips down to the margin of the os internum it is called placenta prævia lateralis or partialis. It is said that normally the placenta is attached to the fundus or side walls of the womb, and the usual position is to the right or left, generally to the right; but that in certain cases it is growing to that portion close to, or immediately over the internal mouth of the organ which constitutes the abnormal condition of our subject matter, and the cause or causes of which are as yet far from being satisfactorily established.

Although this placental mal-position only occurs, according to Meadows, once in about 500 cases of labor, and according to Luck "not quite one case in 1,000," yet I can say that it has been my good fortune to see, on an average, more than one case for every year of the sixteen years which I have practiced medicine, and that, too, in a country practice. The two cases I am about to report occurred in succession, with only five days intervening between them; and their similarity in so many respects being so striking and peculiar, I have deemed them worthy of a record. That it should fall to my lot to witness so many cases of placenta prævia, when the rarity of such abnormalities is, as already stated, as one in 500 or 1,000 cases, is only equaled by the fact that I have only witnessed one case of breech presentation, although the frequency of this class is as one in fifty labors, during that same number of years, barring out, of course, those cases occurring in plurality births and those artificially made into footlings, etc.

Apropos to this subject, I will also, with your permission, recall what may properly be called a coincidence, and which I deem sufficiently worthy of mention here, videlicet, when taking leave of my esteemed preceptor (of whom I can say, as a scholar, as a gentleman, and as a true type of the physician, his superior is not easily found) when about entering on the duties of my profession, he saw fit to give me some valuable advice in obstetrics; and among other things, he especially warned me against being led astray by unusual occurrences, such as placenta prævia, hour-glass contractions, etc., as too many young practitioners were wont to be; "For," said he, "in a practice of some twenty years, I have met with but few cases of the kind." But, nevertheless, he impressed upon me the necessity of recognizing all such abnormalities whenever they happened my way.

However, it so happened that the very next week, in the city of Portage, during the absence of my partner, the late Dr. Waterhouse, I was called to attend my first case of labor, and which proved to be one of the worst and most forlorn cases of placenta prævia it has been my fortune to attend, the unfortunate parturia having been under the charge of an ignorant female doctor for at least twelve hours before I was called to the case; and, on account of the enormous quantity of blood lost, she was not only exsanguinated, but pulseless, and in all respects bordering on the moribund state. From that first case to the present day the same good fortune as to cases of placenta prævia has followed me uninterruptedly, as the following cases, to some extent, can attest:

Case I.—On November 12, 1881, I was called to attend Mrs. J. P., a multipara, a native of Wales, possessing good constitution and vigorous health, in her 30th year of age, and in her sixth confinement. I reached the place of her residence about midnight, and found the patient in bed, in the supine posture, head depressed and hips elevated, with cold wet cloths applied to the hypogastric region. While in the act of examining her, I discovered that both upper and lower extremities were ligated, the first above the elbows, and the latter above the knees, and that the extreme or distal end of each limb was, on account of the impeded arterialization of the blood, in a livid or cyanosed condition. On inquiry, I found that the patient was carrying out a plan which her mother had adopted many years since, while laboring under like circumstances, and which method, she averred, proved entirely effectual in arresting the hæmorrhage until the arrival of the physician, several hours afterward. This, then, was my first lesson in the use of ligatures around the extremities, as a means of hemostasis in uterine hæmorrhage; and, in this particular case, I have no doubt that it proved of some avail. After removing the obstructions, I immediately passed my hand into the vagina, and found the os sufficiently dilated to admit of two fingers; and, finding a severe gush from the uterus, I at once, as is my invariable practice under like circumstances, swept my index and middle fingers between the placenta and the uterus, and succeeded in separating their connection, to the extent of the length of my fingers, which operation at once lessened the severity of the hæmorrhage. Finding, however, on auscultation, that the fœtal heart indicated much exhaustion, I concluded to at once turn and deliver, *i. e.*, as soon as the os could be sufficiently dilated to admit of my hand, and, after slight digital dilatation, I found the os responding readily to my manipulations, even to the extent of admitting the hand. I then searched for a passage between the placenta and uterus, but finding none, I concluded to perforate that organ, which I did with the greatest ease, and after which, I turned and delivered, the product of my efforts being a male child, of the avoirdupois of seven pounds. The placenta soon followed, and the patient made as good, if not as rapid, a recovery, as after any of the previous labors; and, in corroboration of this fact, and also for the purpose of showing the fecundity which is possible, under certain adverse circumstances, I will further state that on August the 18th, 1882, six days less than nine months from the

last labor, I delivered the same woman of a viable child.

CASE II.—On November 17th, 1881, five days subsequent to the first case, I was called to attend Mrs. A. J., a multipara, a native of Germany, of good physique and excellent health, in her thirty-sixth year of age, and in her sixth confinement. I found the patient, from excessive loss of blood, much exhausted, as well as wearing the pallor of death, being barely able to speak above a whisper. A noted but ignorant midwife (lately imported from the land of Gambrinus), had been in attendance all day, having, in the mean time, administered to the unfortunate parturia several draughts of some "black stuff," which no doubt was the fluid extract of ergot. Finding no progress, save that of hæmorrhage, she concluded about dusk to inform the family that "she guessed labor was indefinitely postponed," consequently she would retire to her home, and if it would be necessary, at any time to call her to do so at once, as she averred that when the "baby came" it would be "very much quick in a hurry." The husband called me about midnight, and on examination, I found the os much contracted and unyielding, barely admitting the point of the index finger, and, no doubt, the immediate result of ignorant administration of the oxytocic. However, persistent and unyielding digital dilatation finally forced the os to dilate sufficiently to admit of two fingers, when I concluded, as before, to separate the utero-placental relation, as far as the length of my fingers would permit; and, on account of the renewed and severe paroxysm of hæmorrhage, and the dilatability of the os and cervix after the detachment, I concluded, as in the other case, to perforate the placenta, enter the uterus, turn and deliver, which I did with ease and celerity, the result of my efforts being a dead female child of the weight of six pounds. The placenta, as in most cases of mal-implantations, soon followed; and the mother made a good, but not as rapid, a recovery, as she of the first case.

I am fully aware that many authors condemn the practice of perforating the placenta—that such practice is fraught with danger to both child and mother—but I firmly believe, especially in cases where the placenta is centrally implanted, the hæmorrhage in alarming gushes, and the life of the mother and child in imminent danger, that the method which I adopted offers a safer and speedier means of relief than any other plan known to me. The process of perforating the placenta, by insinuating the fingers through its spongy tissue, is easily and quickly done; and by this same process, so easily and quickly accomplished, we can successfully control the hæmorrhage, for, the moment the fingers are passed through, then the hand, and subsequently the arm, it will at once be seen that by each of these successive movements, we not only completely plug the os, but we also bring an amount of compression to bear on the bleeding portions of the placenta and cervix, that is at once sufficiently effectual to arrest the hæmorrhage; and, not only this, but when the arm and hand are withdrawn, the legs, hips, trunk and head of the child, are brought down in succession (or in an uninterrupted course of plugging from the start), and, as a consequence, they again, in their turn fulfill the same office, only in a more efficient manner, until the child is born, and the impending danger is averted. Another fact in favor of this mode of procedure, is the dilatability of the os and cervix in cases of placenta prævia hæmorrhage, for I know whereof I speak, when I aver that the uterus, from loss of blood in these cases, is rendered more passive and dilatable, and consequently, version is made easier of accomplishment than in any other mal-presentation, a fact which I discovered as soon as my fingers broke up the utero-placental attachment of my first case, some sixteen years ago, the os and cervix having relaxed and dilated with a rapidity unknown to me under any other condition or circumstance. Therefore, with these facts before me, I believe that, without a doubt, *perforation*, *version* and *delivery*, and that too, at the *earliest moment practicable*, is the only true method of dealing with placenta prævia centralis, for, as far as my knowledge and experience extends, this is the method of all others that offers the greatest protection and safety to the life of both mother and child. Whether the patient is greatly exhausted from excessive flooding or not—whether she is, from exsanguination, hovering as it were, on the "border land," while her attendant is on the "ragged edge" of despair, it matters not—for I believe that in all cases, where the os and cervix uteri is dilated or dilatable, (and, as already stated, this condition is rarely absent in cases of excessive placenta prævia hæmorrhages), that immediate resort to this plan of procedure is our imperative duty; and, with a full consciousness of the importance of the subject, I am ready and willing to be placed on record, as saying—*that, without a doubt, rapid perforation, version, and delivery, offers the easiest, speediest, und safest chance of life to the child, and reeovery to the mother, of any manner or mode of management heretofore advocated and known to me.* Many of those treated by me, on this same method, were so far exhausted (and whose prostration was so appalling that death seemed inevitable) as to make me doubt the propriety, as well as the advisability, of doing anything in their behalf, but believing as I do, whenever I am called to the bedside of even so forlorn a case as some of these appeared to be, that it is my duty to do something, and that something my very best. I have been gratified in each and every case, to see, after the removal of the fœtus and secundines, a return of vitality and consciousness, as well as complete reaction and restoration. It is no wonder, then, that I am of those who firmly believe that a patient cannot be so far exhausted as to render turning too hazardous an undertaking, especially when we know that the very life of the parturia is depending on the successful removal of the contents of the uterus. The Mickawber-like inactivity of some physicians, in the presence of so great a lesion as that of placenta prævia, by adopting the policy of "folding the hands," or "let alone," as if a correction of the mistakes of nature could be ameliorated by their own mistaken notions of "let alone," is to me, not only *culpable*, but *criminal.*

To corroborate the statements already made, provided that figures carry any force with those who may believe otherwise, I will state that out of the number cases which fell into my hands—seventeen in all—I did not lose a single mother, although in opposition to this fact again, I must acknowledge the loss of all the children, but one. It is well known, however, that in cases of placenta prævia, the mortality is notoriously great—*the mothers as one in three, and the children as one in two*—yet with such a mortality among mothers, I lost none, whereas among the children, I lost all but one. In extenuation of this great mortality of children, among the cases I attended, I have this to offer, videlicet, that eight-tenths of all the cases had been in the hands of ignorant women or incompetent practitioners, for at least ten, and, in some instances, more than twenty hours, previous to my taking charge of them; and the loss of blood, in the majority of cases, was so excessive and prolonged, that it were folly to look for anything save an asphyxiated fœtus, as the result of so reckless a mismanagement; and the greatest wonder to me is, not so much the loss of the children, but the good results which followed the mothers. In only one of the seventeen cases witnessed by me, could I hear the fœtal heart distinctly and without a doubt, and that was case I of this report; and of every mother, although version was resorted to in every instance, none were lost, but all recovered, with nothing worse than phlegmasia dolens (in two only), as sequelâe. I attribute my success, in regard to the mothers, to my invariable practice of delivering as soon as possible; and when ever this was interfered with, by a tense, rigid and unyielding os, a resort was had in every instance to immediate digital dilatation, the readiest as well as the most feasible and effective mode of dilation: and, although sometimes this proceedure would appear slow, tedious and ineffectual, nevertheless I found that firm and persistent manipulations invariably succeeded in sufficient dilatation to admit of the hand, and thus, at the outset, secure safety from flooding. In one case only did I use the tampon (for the purpose of arresting hæmorrhage and aiding dilatation), and that one case proved too many to warrant a repetition of the same procedure, for I nearly lost my patient on account of its inadequacy and deception. Barnes' dilators were tried and discarded, on account of their impracticability and insufficiency, the difficulty of keeping them in position, in cases of placenta prævia, proving them as worthless in these instances, as they are useful in cases of normal cephalic labors.[1] In no case did I use the forceps, and that for the very good reason that I am emphatically opposed to the use of that most useful of obstetric aids, in any and all cases of head last deliveries. My reasons for excluding the forceps in these cases, when it is so universally recommended, by authors and teachers, is this—*it is not only unnecessary, but unintelligent, as well as a wrongly applied force!* The head, in my opinion, can be disengaged quicker, easier and safer, by the manipulations of the accoucheur, provided he is thoroughly versed in the mechanism and physiology of labor in breech presentation, than by the use of the forceps, even if wielded by the most dexterous manipulator; and to affirm with confidence that I can disengage any well proportioned head from a normal pelvis, by manual efforts alone (aided if necessary, by the nurse or any other person present, when supra-pubic pressure is necessary), in less time than it is possible to apply one blade of the forceps to the side of the child's head, is as free from "excessive egotism," as it is possible for an honest belief to be. In making this statement, I am fully aware that in all cases of head last deliveries, whether in natural cases or those artificially made, that the supreme moment of danger to the child is, when the head approaches the brim and becomes engaged in it, for it is about this time that the uterine forces lose their power of assisting the further expulsion of the child, As in normal breech cases, so in those artificially produced, whether from placenta prævia or other causes, it matters but little how long the labor has lasted thus far, if the hæmorrhage has been brought under subjection and fully controlled, provided of course the funis has been protected, by being placed where it will receive the least compression, and, provided also, that the shoulders have been promptly and completely rotated, so as to bring the bis-acromial diameter of the shoulders into the conjugate diameter of the pelvis, for by this movement we succeed in placing the head in the transverse diameter at the brim, in which position, even if extended, sufficient room will be found to bring it down and have it delivered with a rapidity and ease that will warrant its integrity and viability; and I believe the power necessary to accomplish all this, should be in the accoucheur's own well-instructed brain, and not in a dependence on his iron instrument, the obstetric forceps; for any other plan of procedure is not only unintelligent, but a wrongly applied force.

In conclusion, I again repeat, that in all cases of placenta prævia, especially if centrally implanted, provided that it is evident to the attending physician that the hæmorrhage is in alarming gushes, and about to overwhelm both mother and child, or that the hæmorrhage is such as not to yield without first emptying the uterus of its contents, immediate digital dilatation, perforation of the placenta, podalic version (and that too by introducing the hand into the womb), and rapid delivery, offers the quickest, easiest and safest mode of relief, in our opinion, of any yet suggested.

[1] "I had one case in which the excessive action of the uterine contractions had violently detached and forced the secundines into the vagina, where I found them several hours afterwards, while the fœtus was yet within the cavity of the uterus.

GASTRO-ENTEROTOMY FOR INTESTINAL OBSTRUCTION. TWO CASES—BOTH FATAL.

BY W. M. FUQUA, M.D., HOPKINSVILLE, KY., SEPT. 1, 1883.

In the summer of 1880, I visited a negro man on the premises of Mr. Campbell, in Trigg county, in consultation with Drs. Boyd, Edwards and Worthington, of LaFayette. He had suffered from ob-

structed intestine for about a week; was 35 or 40 years old, and in the main had good health. The patient presented the following condition: Tenderness and tympanitis over the whole abdomen, right side of abdomen most prominent and resonant; pulse 130; respiration 24; stercoraceous vomiting; skin cool, and tendency to collapse. Rectal examination revealed nothing. After a careful and thorough discussion, it was unanimously agreed to make an abdominal section, entertaining the idea that the patient labored under intussusception, looping of the intestine, or some other form of acute obstruction.

After administering chloroform, and drawing off the urine, the abdomen was laid open from the umbilicus to the pubes. The intestines, distended to their utmost, gushed out. The venules and arterioles distributed upon their surface were turgid with blood and plastic with lymph, and so thinned by the distribution that they were semi-transparent. This distension was somewhat relieved by piercing the gut with an aspirator needle. Now, after carefully examining the jejunum and ileum, no obstruction was found, except at a point within 2½ inches from the ilio-cœcal valve, and extending thereto. The large intestine was free from inflammation, except in the vicinity of the obstruction, and was empty. Here we had an organic stricture of the intestine, and its location was of such a character as to preclude resection. So distended was the intestine from its fluid and gaseous contents, that it was opened in two places, and nearly a gallon of fluid matter allowed to escape, after which the intestine was nicely sutured, and returned to the abdominal cavity, which was carefully sponged and dried. The abdomen was carefully sutured with silk, and supported by a wide flannel bandage. The question of artificial anus was not taken into consideration, because of the condition of the patient, who died soon after the wound had been dressed.

Case Second.—In June, 1881, I visited Mrs. M., in consultation with Dr. J. C. Whitlock, and Dr. Job Cooper. This lady had always been of good health, was about 36 years old, and the mother of several children. Occasionally she had light attacks of colic, from which she easily recovered, without applying to her physician. Some six or seven days prior to my visit she had one of these attacks, and not getting as prompt relief as usual, her husband sent for Dr. Cooper, and subsequently Dr. Whitlock. The gentlemen failing to remove the intestinal obstruction after using every legitimate means, requested me to come and make a laparotomy.

The patient presented the following condition: no action from the bowels for six days; great nausea and vomiting, and had cast up sturcoraceous matter; was very restless, with occasional pain around the umbilicus; pulse 120—respiration 20; skin warm and perspiring, with a temperature of 102 F. The abdomen was very considerably swollen, intestinal resonance distinct over nearly the whole surface, rectal examination revealed nothing. Now, after carefully weighing every feature and symptom in this case, we unanimously agreed that nothing short of abdominal section, offered any hope of relief. Both the patient and her husband, and children, were anxious the operation should be done. The preparations for the operation were carefully made, and no detail, however trifling, was omitted. The abdomen was carefully cleansed, as well as the sponges, instruments, and the hands of those who should assist, with carbolic acid solution. To Dr. Geo. Campbell, of this city, the chloroform was intrusted. After drawing off the urine, I opened the abdomen from the umbilicus to the pubis in the usual manner, and when the omentum was turned aside the small intestines gushed out together with a considerable quantity of red serum, and what remained of this fluid was carefully sponged out. The peritoneum was greatly inflamed, as well as the entire intestinal tract, and upon its surface patches of lymph were to be seen everywhere. The small intestines were greatly distended, partly by its fluid contents, and by gas. The intestine was pierced by a large aspirator needle. The gas was allowed to escape. After carefully tracing the whole intestinal tract, to our great surprise, no obstruction was found at any point of its course, and we learned to our chagrin and disappointment, that we had been deceived in our diagnosis, and that this case must be accounted for on the grounds of inflammatory action and paralysis, from over-distintion. In order to more effectually relieve the over-distended gut, the intestine was carefully opened, and a gallon of highly offensive fluid, was allowed to escape. Now, after closing the intestine with the glove suture, and the abdomen sponged out and dried, the abdominal wound was accurately adjusted, and held in place by silk sutures, and, over which, a large compress wet in carbolic acid solution, was placed, and held in position by a wide flannel bandage. The shock in this case was fearful—the operation lasting 40 minutes, and it was several hours before reaction was established. After this was done the patient expressed herself as feeling better. Opium and calomel, directed in moderate doses every 3 hours, and belladonna in small doses every 4 hours, with compress wet with solution of carbolic acid, kept continuously over the abdomen. This lady survived the operation about 24 hours.

REMARKS.

I place on record these two fatal cases of gastro-enterotomy because they were fatal; secondly, that they resulted from the direct effects of acute inflammatory action, and not the remote effects, as from organized fibrinous exudation; thirdly, that our diagnosis was fallacious. In either of these cases, so soon as the peritoneal cavity was opened, and the extensive inflammation revealed, together with the red serum, the result of this grave action, there could be no doubt of the prognosis, whether the obstruction be relieved or not. The unavoidable gushing out of the bowels, their consequent exposure to the air for some time, and the subsequent enterotomy, was ample to account for the shock in both cases.

Further, it will be readily observed that diagnosis is of the first importance, which should be determined in the onset of the case, and if delayed many complications must arise which would preclude accu-

racy of diagnosis, and when doubt exists, an exploratory incision is warranted.

When a hernia is recognized, and taxis fails, we count it good surgery to release the incarceration, and all experience teaches the longer the delay the greater the danger. Unhappily, no taxis except in an indirect way, can be resorted to in concealed intestinal obstruction, and hence the greater necessity of prompt diagnosis and corresponding surgical action.

MEDICAL PROGRESS.

Action of Alcohol on the Heart.—The following is quoted from an article by Professor Martin, of John's Hopkins University, in the Maryland Medical Journal for September, 1883.

Although the physiological effects of alcohol manifest themselves in many directions, we can only hope to arrive at valid conclusions by taking up the questions one by one. Our own researches made on dogs have been confined to a quite limited field, viz.. what is the direct and immediate action of alcohol upon the heart, both as to its rate of beat, and as to the work done by it in a given time. Chronic abuse of alcohol of course affects the heart; but our inquiry has hitherto been limited to the immediate action upon the heart of a moderate quantity of pure alcohol added to the blood flowing through it; the heart being put entirely out of control by extrinsic nerve centers, and isolated from all other organs but the lungs. In other words, our problem was. What is the immediate action, if any, exerted upon the heart by a single dose of ethylic alcohol?

As regards action upon the pulse-rate, our experiments confirm those of Zimmerberg and others, alcohol in doses not directly poisonous does not affect the rate of beat of the heart.

As to the influence of alcohol upon the work done by the isolated heart we have, however, obtained some results which we believe to be new.

Our method of experiment was as follows: A dog having been placed fully under the influence of morphia sub-cutaneously injected, its heart and lungs were isolated in the manner which I had the honor to describe to this Faculty two years ago.[1] The heart was then fed with defibrinated blood obtained by the previous bleeding of other dogs, and supplied to the superior vena cava, under a constant pressure from Mariotte bottles. These bottles were four in number; two of them arranged to contain and distribute blood containing no alcohol, and two of them blood containing alcohol. By stopcocks any bottle could at will be connected with the heart. At the commencement of the experiment the heart was fed with blood mixed with one-fourth its volume of 0.75 per cent. solution of sodium chloride in distilled water—2,000 cubic centimeters of blood mixed with 500 cubic centimeters of the salt solution. This blood, passing from right auricle to right ventricle, was sent through the lungs to the left heart, and from the left ventricle was pumped out into a tube connected with the right carotid artery. The aorta was ligatured immediately beyond the origin of this vessel. The tube connected with the right carotid conveyed the blood to a height sufficient to maintain about an average arterial pressure, as measured by a mercury manometer connected with the root of the left carotid. The pen of this manometer recorded on the kymograph not only the average arterial pressure, but the pulse rate. Uniform and free artificial respiration was maintained by a water engine.

The mode of work was as follows: One of us took charge of the kymograph, and was also responsible for time signals. All being ready, the heart was placed in connection with a flask containing good blood and allowed to pump blood from this flask into another. Let us call the four flasks A, B, C, and D respectively. When flask A was empty and B filled, it was easy, by opening and closing the proper stopcocks, to supply the heart from B and let it pump into A, and so on, to and fro, with the good blood for a certain time. At short intervals the blood pumped out by the heart in a minute was collected separately and measured. As soon as it was found that this work was pretty constant, varying not more than 10 cubic centimeters in a minute, the good blood was shut off and the poisoned blood from C turned on; this was pumped into D and collected there. While this poisoned blood was circulating, the quantity pumped out by the heart was measured from minute to minute; then good blood again turned on, and the measuring continued. Any experiment in which the heart did not under these circumstances show marked recovery from the action of the alcohol was rejected, so as to avoid the risk of ascribing to the alcohol something which was possibly due to the independent death of the heart.

The general result of our experiments may be primarily stated as follows: *Blood containing one-eighth per cent. by volume of absolute alcohol has no immediate action on the isolated heart. Blood containing one-fourth per cent. by volume, that is two and a half parts per thousand of absolute alcohol, almost invariably remarkably diminishes within a minute the work done by the heart; blood containing one-half per cent. always diminishes it, and may even bring the amount pumped out by the left ventricle to so small a quantity that it is not sufficient to supply the coronary arteries; hence blood is drained off by them from the outflow tube and at last none is pumped out from its upper end at all.*

We may here point out that the dose of alcohol was not *a priori* a large one. A man weighing 150 lbs. contains about 11½ lbs. of blood; one quarter per cent. of this is 0.46 of an ounce, a quantity exceeded by that in a single ordinary drink of brandy, and some people take a good many such drinks in a day. Moreover, the alcoholized blood in our experiments could hardly have acted on the heart as it flowed through its cavities; it must almost certainly have acted on the heart after it flowed through the coronary arteries to the capillaries of the organ and came into close relation with its muscular and nervous

[1] Transactions of the Medical and Chirurgical Faculty of Maryland, 1882, p. 203.

tissues. To get to these capillaries it had first to circulate through the lungs, and there is no doubt some of even the small quantity of alcohol present was eliminated.

What is the cause of this diminution in the quantity of blood pumped out?

Differences in the flasks and rubber tubes being excluded as causes of the phenomenon, we have to seek for it in some action exerted by the drug on the living organs; and here several possibilities suggest themselves. It might be that the alcohol constricted the pulmonary vessels, and so prevented the blood from reaching the left ventricle as freely as before; or it might be that it dilated the coronary arteries and so drained off more blood through the coronary circuit, and thus left less to be pumped out from the exit of the outflow tube; or it might be that the pumping power or the capacity of the left ventricle was altered; or, of course, there might be combinations of these.

We were set on the right track one day when we modified the experiment by cutting away the pericardium before administering the alcohol. To our surprise, even blood containing ½ per cent. of alcohol now had little or no effect on the work done by the heart.

We tried this repeatedly in another manner. Keeping the heart in the pericardium, we administered alcohol and got the usual result; then recovered the heart by good blood, cut away the pericardium, again gave alcohol, and now with little effect. As the absence of the pericardium could hardly in any conceivable manner prevent constriction of the lung arterioles, or prevent dilatation of the coronary vessels, it was clear that neither of these would account for the results of the administration of alcohol.

Our attention was therefore turned to the proper heart substance. Direct observation of the organ, in fact, showed it to become enormously distended when supplied with the alcoholized blood. Normally, the dog's ventricle contracts so as to completely empty itself and obliterate its cavity. Under the influence of alcohol this is entirely changed; the ventricle ceases to contract completely; even at the height of its systole the organ completely or nearly completely fills the pericardiac sac; in its diastole it has little or no room to expand further and take in a fresh supply of blood.

Hence a great diminution in the quantity of blood which it has ready to pump out at its next contraction. If now the pericardium be cut away, the heart enlarges enormously in diastole, takes in its usual quantity of blood, and drives it out at the systole; hence the organ performs its usual amount of work. This seems to show that the muscular power of the organ is not at first influenced; if the heart be not confined in the pericardium, and the quantity of alcohol in the blood flowing through it does not exceed ½ per cent. by volume, the work done is not affected, at least for a considerable time. It is not the contractile power, but the elasticity of the cardiac muscle that is influenced; its "tone" is lowered, and it works under new, and, when the pericardium is present, very unfavorable conditions. It acts like a greatly relaxed muscle, which contracts to half its normal extent, compared with a healthy muscle, in good tonic state, which when fully extended is shorter than the atonic, and whenever it contracts, contracts more completely; and, so far as the heart is concerned, to the fullest possible extent. If, however, the administration of alcoholized blood of ¼ or ½ per cent. be long continued, or if blood containing 1 per cent. of alcohol be used, then, even with the pericardium removed, the systole becomes feebler and feebler, the work done less and less, and finally *nil*.

Whether alcohol directly combines with the cardiac muscular tissue, or whether it indirectly influenced it by interfering with its nutrition, we are not able to say. The rapidity with which the effect manifests itself seems in favor of direct poisoning; on the other hand, the dog's heart will only bear a very brief deprivation of oxygen, and it has been shown that alcohol added to the blood makes it hold its oxygen more firmly and yield it less readily to the tissues; and the heart subjected to alcohol has very much the appearance of the heart of an asphyxiated animal. On the whole, we are inclined to think that the poisoning is direct.

We have made a few experiments to see what dose of alcohol given by the stomach to a dog will produce some similar action on the heart. When the heart lies in the body and in connection with the central nervous system, there are of course considerable difficulties to be overcome, and all we can say as yet is, that to get any distinct influence on blood pressure, one must put much more alcohol into the stomach than an amount equal to ¼ per cent. of the total blood in the animal. It is either not absorbed fast enough to reach at any moment the heart-poisoning limit, or, more probably, is picked up by other organs, very likely the liver, and held back from the heart.

We then tried in another way, by directly injecting into the jugular vein of a curarised dog a small quantity of salt solution containing an amount of alcohol equal to ¼ per cent. of the total blood of the animal, reckoned as one-thirteenth of its weight. In such cases we found usually a very temporary enfeeblement of the heart, indicated by a lower arterial pressure, but this seems only to last while the injected solution is flowing through the organ, or for a few seconds afterward. Before the blood returns it has apparently deposited its alcohol elsewhere in the body, or at any rate got rid of it somehow, so that it no longer acts immediately upon the heart, at least to a directly noticeable extent.

SALICYLATE OF BISMUTH IN TYPHOID FEVER.—This has been recommended lately, and to any desirous of testing its virtues the following, from the *American Journal of Pharmacy* for September, may be of interest:

Dr. Desplat, who is favorably known by his numerous theses on the antiseptic treatment of fevers, especially by a memoir published last year on the treatment of typhoid fever by carbolic acid, after long experimentation with various salicylates in typhoid fever, has found the salicylate of bismuth the great

desideratum. In his experience it has even had a marked abortive action. Out of twenty cases reported by him eleven treated in the first stage were cut short in four or five days under the free use of salicylate of bismuth. The ordinary dose is about a scruple. This was repeated, so that the daily quantity taken should equal about six grammes.

This salt is comparatively unknown in this country. As it is not readily prepared by double decomposition from the other salts of bismuth with salts of salicylic acid, it can only be formed as a sub-salicylate. This salt is a soft white powder, insoluble in water, without separating the salicylic acid on heating to boiling; but it is readily soluble in dilute muriatic acid when boiled, the salicylic acid separating on cooling, in flocculent white crystals. Care must be taken in its preparation to avoid too much heat, as the tendency is to convert the salt into ordinary oxide of bismuth and salicylic acid. Whether it is superior to the salicylates of the cinchona alkaloids is not mentioned, but if its value as a remedy should be owing to its difficult solubility, possibly they may prove as efficient, for the salicylates of quinine and cinchonidine are very difficultly soluble in water, and would hardly be as likely to prove irritants in case of violent inflammation of the diseased vitals, where, if particles of undecomposed salt of bismuth could aggregate, might produce very dangerous results.

Use of Naphthol—The following opinions weer expressed in regard to the usefulness of this drug, at the meeting of the American Dermatological Association, Aug. 29: Dr. Van Harlingen found it of great service in scabies, also of some value in the treatment of psoriasis. In parasitic skin diseases it was of but little use, while in eczema and hyperidrosis it was entirely without value.

Dr. Fox had tried it externally in almost every case where he could possibly employ it, and had become convinced that it fell far short of taking the place of tar. In a few cases of eczema of the scrotum and anus he had obtained very satisfactory results from the application of a five-per-cent. ointment. For psoriasis of the scalp and face the ordinary white-precipitate ointment has served more satisfactorily.

Dr. Hardaway did not find it as useful as chrysophanic acid in psoriasis and eczema. In the fissured and squamous eczema of the palms of the hands and fingers he had employed a fifteen per cent. ointment successfully.

Dr. Stelwagon thought for psoriasis of the scalp that it was less valuable than white-precipitate ointment. It is efficient for scabies.

Dr. Piffard thought it a dangerous remedy.

Dr. Taylor had used it successfully in scabies, but in psoriasis it had not proved efficient.

Sexual Differences in the Surface of the Brain.—Attention is called to the following facts of interest by Dr. Thomas Dwight in an article in the *Boston Medical and Surgical Journal* for September 6:

Very little notice has been taken of the influence of sex in the size and shape of the brain, and more especially the convolutions, in spite of the great attention the subject in general has received. Nearly thirty years ago Huschke maintained that differences in the convolutions of the male and female brains could be detected. He stated that as a rule the fissure of Rolando was more nearly vertical in woman than in man, so that the distance of the top of the fissure from the posterior end of the brain was relatively greater in the former. Consequently in man the frontal lobes, and in woman the parietal, were relatively the larger, and the female brain was rounder. Recently Professor Rüdinger, of Munich, has taken up this subject, and has turned his attention to fœtal brains. He states that in most male fœtal brains the frontal lobes are more massive, broader, and higher than in female ones; that the convolutions in the female fœtus of seven or eight months are much simpler than in the male. He finds, also, that the fissure of Rolando is more oblique in the male than in female, and consequently there is more cerebral matter in front of it in the former and behind it in the latter. Dr. Passet has also devoted himself to the study of these questions, and has made careful measurements of twenty male and seventeen female brains. The fissure of Rolando, he finds, is more oblique in the male than in the female, and is also longer and more curved. It lies both absolutely and relatively further back in man; in other words there is more cerebral matter in front of it. The male brain is pretty clearly longer, broader, and higher than the female. As the male brain is the larger, it follows that the fissure of Rolando is more distant from both the coronal and lambdoidal sutures than in the female. The parieto-occipital is usually in front of the lambdoidal suture in both sexes, but is likely to be more distant from it in the male.

Egyptian Cholera.—The further investigations are carried in reference to the origin of the severe cholera epidemic in Egypt, the more probable it appears that the disease was of local origin. As bearing upon this subject, the following will be read with interest:

A letter from Cairo to the *London Standard* says: "Dr. Schaffey Bey, who was dispatched by the Egyptian government to report on the origin of the outbreak of cholera in Damietta has issued his report. After giving an account of the almost incredibly unsanitary state of the town and of the mode of life of the inhabitants, Schaffey Bey finally concludes that the theory of the importaion of the disease from India is altogether untenable, and he draws up his conclusions as follows:

"We find that besides the points already noted, which stamp Damietta as the type of an unclean town, there are the following circumstances to be considered:

"1. The mouth of a river dried up by prolonged drought, with its banks and part of its muddy bed fermented under the sun's action, exposed.

"2. This river carrying along with it (and depositing them at the bend formed at Damietta) thousands of carcasses of animals which it throws up at its edges, to putrefy under the damp heat.

"3. It is at this place the river receives the outcome of the drains, animal and vegetable refuse, and all sorts of filth which the current cannot carry off, being beaten back by the waves of the sea.

"4. The miasmata generated by all this putrefying matter here mixes with the vegetable effluvia rising from the marshes, from a soil full of organisms, and from the wide rice-fields which surround the town.

"5. It is the water of this river which supplied all the needs of most of the inhabitants and of more that fifteen thousand persons from various parts of Egyyt who assembled at Damietta for eight consecutive days at the fair of Sheikh Abou el Maati. An analysis of this water by the government expert proves it to teem with impurities.

"6. During the eight days of the fair regular orgies were held, exclusively of the flesh of animals who died of bovine typhus, and whose skins now fill the store-houses of the town.

"7. It was immediately after the fair that the disease broke out.

"8. The 19th, 20th and 21st of June were marked here by a sudden rise of temperature.

"9. The epidemic broke out chiefly in the most unhealthy and thickly populated quarter, inhabited by the poor, who drank only the water of the river and canal.

"10. The disease remained for some time localized at Damietta before spreading further, and its spread was invariably in the towns on the river, or carried by sick emigrants from Damietta, as proved by the towns of Port Said, Alexandria, Ismallia and Suez.

"These facts seem to prove that the same conditions, cosmic and hydrotelluric, which are present at the genesis of cholera germs in the Indian delta, and on the banks of the Ganges, were accidentally observable this year in the Egytian delta and on the banks of the Nile."

There is much more of interest in the report, but the above extracts give the pith of it. From personal knowledge of the town of Damietta, I am able to vouch for the accuracy of the description of it. As to the remarks on the water supply, they hold good more or less in regard to any town in Egypt. It is probable that Dr. Hunter, on his return from the inspection he is now making, will be able to add further to our knowledge of the cradle from which cholera sprang this year.

A parliamentary paper has been issued, containing a report from Surgeon-General Hunter, to Sir Edward Malet, on the cholera epidemic in Egypt. The report, which is dated Cairo, Aug. 6, states that "it is simply an abuse of words to talk of sanitation in connection with Cairo, every sanitary law being grossly set at defiance;'[2] and adds, that "conditions for the development and spread of disease in almost every form, epidemic or otherwise, abound. They are here, there, and everywhere present to the sight, smell and taste." After expressing the opinion that in all essential features the type of the epidemic does not differ from cholera, as it is experienced in India, Surgeon-General Hunter proceeds:

"It is gratifying to be able to state that the epidemic is on the wane, although still widespread over the country; and the type, as usual in declining epidemics, is much less severe. The number of deaths from this disease, reported up to the 31st of July, is said to be 12,600. Registration is, however, so defective, that this statement must be taken with much reservation. I am inclined to think that it is nearly double this total. The organization of the medical department is in a most primitive condition, and many of its officers are quite incompetent. The latter are broadly accused of being ignorant, and of neglecting their duty through personal fear. That there are many honorable exceptions to this rule, I believe; nevertheless, the allegations preferred, have come to my personal knowledge. In pleasant contrast to this I would observe that the Egyptian soldiers are loud in their gratitude for the devotion displayed by their English officers to their necessities, during the present crisis." Dr. Hunter suggests the thorough reorganization of the medical department, and the establishment of a sanitary department.

THE eighth annual meeting of the American Gynæcological Society will be held at Philadelphia, from the 18th to the 20th of this month. It is expected that the following members will read papers: Dr. J. T. Johnson, of Washington, on Superinvolution of the Uterus; R. S. Sutton, of Pittsburg, on Importance of Cleanliness in Surgical Operations; C. D. Palmer, of Cincinnati, on Some Points Connected with the Subject of Dysmenorrhœa; T. A. Reamy, of the same place, on Unusual Form of Abdominal Tumor; A. R. Jackson, of Chicago, on Is Extirpation of the Uterus a Justifiable Operation; G. Kimball, of Lowell, A Sketch of Dr. Nathan Smith; C. C. Lee, of New York, on Management of Accidental Puncture and Other Injuries to the Gravid Uterus as a Complication of Laparotomy; E. W. Jenks, of Chicago, on A New Method of Operating for Fistula in Ano; G. J. Engelmann, of St. Louis, on Ergot; the Use and Abuse of this Dangerous Remedy; H. L. Campbell, of Augusta, Congenital Fissure of the Female Urethra, with Extrophy of the Bladder and Menstruation After Extirpation of the Ovaries; W. H. Byford, of Chicago, Remarks on Chronic Abscess of the Pelvis.

THE University of Niagara has established a medical department in Buffalo. The course of study will be graded, and will extend over four years. Each annual course will continue for six months. Examinations are to be conducted by a board of medical men, unconnected with the faculty. The lectures will be given for the present at the Hospital of the Sisters of Charity. The first session will commence on the 10th of next month.

THE Municipal Council of Paris has recently voted the sum of $400,000, to be devoted to repairs and additions to hospitals already existing, and $200,000 toward the erection of a hospital for the treatment of chronic diseases, a hospital for small-pox cases, and a children's asylum for incurables.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, SEPTEMBER 15, 1883.

THE AMERICAN MEDICAL ASSOCIATION.—In the present number of this journal will be found the complete paper read by the President of the Association in the Section on Medicine of the British Medical Association, at its recent meeting in Liverpool, with illustrative cases. It relates to a question of decided practical importance, which is liable to confront the practitioner at any time, and in almost any department of his work. But reference to the chief officer of the Association, reminds us that now is the time for all who desire to improve both the quality and quantity of important work done in its several Sections at the next meeting, which is to be held in Washington, to enter at once upon the necessary preparation. The plan of organization is favorable for good, practical work. The number of Sections affords a sufficient division of labor to accommodate alike the general practitioner and the special cultivator of any one of the more limited fields of science or practice. Only two things are necessary to make the practical results of the working of the several Sections at each anniversary meeting not only highly satisfactory and profitable to those who may attend, but also such as would do honor to the profession of this or of any other country. The first is that each member of the Association should attach himself permanently to some one of the Sections, in which he should cultivate a special interest, and for the practical working of which he should feel conscious of a certain degree of personal responsibility. Thi would speedily increase both the stability and effi ciency of each Section, and greatly encourage the officers of each in the prompt performance of their duties. The second is the devotion of more time and thought to the selection of the topics and the preparation of the papers and discussions that are to occupy the time of the Sections at each successive meeting.

For instance, those who are intending to present papers or the results of any original investigations at the next meeting, should commence their work early in the season, that it may be fully completed before the time of meeting; and they should notify in proper time both the officers of the section in which they propose to work and the Chairman of the Committee of Arrangements, of the nature and extent of the matter they intend to present, that the said officers may have the opportunity to assign such proposed work to a proper place on the programme. But in addition to such voluntary contributions, each section, through the recommendations of a judicious sub-committee appointed for that purpose, should select a certain number of questions for investigation and discussion at the next annual meeting, or plan certain lines of original investigation, and assign them to members specially qualified for the work, with instructions to report progress at each subsequent meeting until their work was completed. Such a course persistently carried out would cause the regular annual meetings of each Section to be well attended, and crowded with important matters for the consideration and profit of its members. The excuse for non-action heretofore made by many prominent members of the profession, that communications, however valuable, if made to the Association or any of its Sections, would be completely buried out of sight for nine or ten months, and then only appear in a volume that would reach but a few hundred members, no longer exists. The establishing of a weekly medical journal, each issue of which already goes to more than three thousand representative members of the profession, distributed in every State and Territory of our country, affords a speedy and ample medium through which all matters of importance communicated to the Association or any of its Sections, can be promptly presented to the profession at large.

Let every member and officer of the Association think of these things, and act accordingly.

EPIDEMIC DISEASES.—According to the latest advices from Pensacola, no cases of yellow fever had occurred in that city, and notwithstanding some reports to the contrary, a careful inspection from house to house has detected none in the villages, outside

of the grounds belonging to the Naval Station. But few new cases have occurred within the Naval Station during the past week, and it is thought that the disease is on the decline there. No cases are known to exist in any other places in our country outside of quarantine stations to which they may have been taken from infected ships.

It is said that an epidemic form of dysentery of considerable severity is prevailing at Bybalia, in the northern part of Mississippi, from which over sixty deaths have already occurred.

CHOLERA.—Since the cholera epidemic in Egypt is steadily declining, and the fears of an immediate invasion of Europe, somewhat allayed the English government officials, as well as the newspapers and medical periodicals, begin to manifest some irritation at the severe criticisms and accusations that have been freely indulged in by the press on the Continent and especially by that of France. The main charge of having needlessly permitted the introduction of the disease into Egypt from India rather than interfere with her commerce, is explicitly denied by the proper officers of the English government, and repelled with much indignation by some part of the English press. Our advice is that all parties preserve their dignity by holding their temper in subjection, until the numerous scientific and sanitary commissions supposed to be dilligently engaged in the investigation of the origin and nature of the scourge, shall have made their reports. Possibly we may then have a sufficient record of reliably ascertained facts to show whether the disease was really brought from India or whether it originated from the foul air and horribly contaminated water in the valley of the Nile.

PROGRESS OF STATE MEDICINE.

FROM PAPERS PRESENTED TO THE OFFICERS OF THE SECTION ON STATE MEDICINE.

In the last preceding number of THE JOURNAL we copied the report of the representative member of the Section on State Medicine from Illinois concerning the practical working of the State Board of Health of that State, both in its relations to State sanitation and the regulation of the practice of medicine, and also the report of the representative of the medical staff of the U. S. Navy. We now make the following selections of such facts from the reports of representatives from other States as are thought worthy of record. Dr. D. E. C. Ewing, of Arkansas, reports as follows:

"We have forty or fifty local Boards of Health, located throughout the State, in the cities and incorporated towns. They are under the control of the municipal authorities of the cities and towns in which they are located. They act in concert with the State Board of Health to prevent the spread of contagious diseases.

"Our last General Assembly failed to make any appropriation for the maintenance of the State Board of Health. I fear, if we should be visited by an epidemic of yellow fever or small-pox, the State Board would be unable to make the necessary quarantine to protect our people against such epidemic, for want of funds to defray the expenses that would necessarily occur.

"On March 9, 1881, an Act to Regulate the Practice of Medicine and Surgery was approved by the Governor, and went into effect the 1st of July following. This act requires registration in the county clerk's office of each county in the State, establishes a board of three medical examiners in each county, and a State Board of five members, to act in case of appeal from the county board.

"All who shall have practiced medicine, surgeyr or midwifery in the State for five years preceding the passage of this act, are exempt from examination before the board, and upon proof of two creditable witnesses known to the clerk of said county where they reside, are allowed to register, and be vested with all the privileges of regulars. This law is very defective, but was the best we could get passed by our General Assembly at the time.

"March 9, 1881, the Governor approved an act regulating the sale of poisons. The law requires the druggists to keep a register for the purpose of registering the names of persons buying such (medicine designated as poison), and to register the name of purchaser and kind and quantity purchased, with date of same.

Dr. Charles Denison, of Colorado, reports that the laws creating and defining the duties of the State Board of Health and the State Board of Medical Examiners for that State have undergone no change during the past year. The last legislature, however, passed a law for legalizing dissections and permitt ing the bodies of paupers, dying in public charitable institutions, not claimed by friends for burial, to be used for that purpose.

Dr. J. T. Reeve, of Wisconsin, reports the following concise and interesting items in regard to sanitary measures in that State:

1st. Wisconsin has an organized State Board of Health.

2d. No changes in its organization have taken place, except the appointments of Prof. W. W. Daniells and of Dr. S. C. Johnson in the places respectively of Dr. E. L. Griffin, formerly President of the Board, and General James Binttiff, one of the original members, both of whom resigned, and the election of Dr. S. Marks as President of the Board to fill the vacancy caused by the retirement of Dr. Griffin.

No new powers or duties have been given the Board, but a closer bond of union has been established between it and Local Boards.

3d. A law enacted this past winter makes obligatory the organization of Local Boards of Health, in a sense auxiliary to this Board, in every town, village and city in the State. This law is yet too new to enable me to say anything definite regarding its workings, but every effort possible is being made to put it into efficient, successful working order. Thus far, about 700 of such Local Boards of Health have been reported to this office and additional reports come to us daily.

4. The same law referred to (copy enclosed) makes obligatory the reporting of contagious diseases by all physicians to their respective Boards of Health and also requires the report of such cases by the Local Boards to this Board. The diseases specified are: Small-pox, scarlet fever, diphtheria, Asiatic cholera, or "other dangerous contagious diseases."

5th. No changes have been made in laws providing for the collection of vital statistics, and such statistics are now collected in such a way as to make the returns which are received of no practical value for sanitary purposes.

My answer to your last question: "How can medical men best promote sanitary progress?" in the briefest possible form would be: By the dissemination in popular form and by persistent efforts of that *and that only* as true, which is clearly proven to be so. I very much fear that the "advanced ideas," the setting forth as truth, that which is simply theory and the consequent necessary shifting of ideas and of teachings of medical men and medical organizations also, on sanitary questions, have retarded State and municipal sanitation.

Dr. F. D. Cunningham, of Virginia, furnishes the following brief statement concerning the present status of sanitary measures in that commonwealth:

"1st. There is no State Board of Health in Virginia at present. Several years ago the Legislature appointed one, but gave it no funds and assigned no specific duties, so that its existence, if any, is only nominal.

"2d. The cities of Richmond, Norfolk, Lynchburg, Petersburg, Staunton, Alexandria, and Danville have local Boards, with limited powers under municipal charters.

"The last Legislature authorized certain cities, as above, to make vaccination compulsory, during the past winter. Whilst our legislative bodies have practically ignored the subject of public sanitation in the places above named, the local boards have been reasonably active, and have done much to diminish the amount of contagious diseases, especially in the matter of small-pox and scarlet fever. In this State there is no examining board, nor is any education, medical or otherwise, required to obtain a license to practice medicine. In fact *any one* can get a license by paying five dollars to the State, in spite of all of our efforts to the contrary up to this time, both by individual and concerted action, before the Legislature. All of which is respectfully submitted."

From the brief report of Dr. M. G. Parker, representing Massachusetts, we copy the following items.

1. Massachusetts has a State Board of Health, Lunacy and Charity, which performs the duties of a State Board of Health, under the exisiting laws of the State.

2. No changes have been made during the past year in the organization, powers and duties of the Board.

3. It has no auxiliary, or local organizations.

4. Our public statutes specify only small-pox. The interpretation of the words "other diseases dangerous to the public health" are left to the discretion of Local Boards.

5. I also enclose a bill passed at the present session to compensate physicians and others for returning certificates of births. The fee allowed by the law is twenty-five cents for every certificate returned.

In closing this report I cannot do better than report to the Chairman of the present Board the advice given to the Board last year by my worthy predecessor Professor Henry I. Bowditch, M.D., of Boston, Mass., when he says:

"That State hygiene should not be connected with the charities certainly, and I doubt also whether it should be hampered by the care of lunatics of the State. Hygiene is enough for any Board.

"Again, I would suggest that all State Boards of Health should have physicians as Secretaries and Chairmen, and the majority should be physicians; and, finally, I deem it all-important to have a lawyer, a man of business, and a civil engineer, upon every Board."

From the report of Dr. Van S. Lindsly, of Tennessee, we copy the following:

2. No changes since the law of '79, except a vital registration law, by which the Secretary of the State Board of Health, was made the Superintendent of Vital Statistics. The reports being made

1st: By physicians and midwives, to the senior magistrate of each civil district, and they reporting to the County Court clerks, and they to Secretary yf the State Board of Health. This law was repealed by the Legislature of '83.

The law was practically inert—there being no renumeration to physicians, midwives or magistrates, they took no interest in the matter, and have made no reports. All parties concerned in the active operation of the law of vital statistics, opposed it, and made such efforts as to cause its repeal at the last Legislature, '83.

4. No changes made. The diseases enumerated as dangerous and communicable, etc., are: small-pox, yellow fever, cholera and other epidemic diseases.

It is within the powers of the Board to determine what are the othsr epidemic diseases.

Medical men can best promote sanitary progress, by

1st: Thoroughly informing themselves as to what is *true* and *practical* in sanitary medicine, and pre-

senting their ideas in plain language, before the people, in such journals and prints as will reach them.

2nd: By lectures before teachers and all those who have the instruction and guidance of the young, so that the incoming generation may have the proper ideas instilled into them as they grow into positions of responsibility and trust. The young will carry home ideas to parents, and often become the best propagators of new ideas to their elders.

I think the crude and imperfect methods of presenting sanitary reforms and the apparent mistakes of would-be reformers, in pushing so-called advanced ideas and radical measures of medical men and medical organizations, have retarded State and municipal sanitation. But this is no reason why better and wiser efforts in the future may not succeed.

The representative from Rhode Island, Dr. James H. Eldridge, makes the following concise statement:

1st. There is a State Borad of Health in Rhode Island, organized April, 1878.

2d. No changes have been made during the year ending May 1, 1883, in the organization, powers or duties of the Board.

3d. The public statutes make the town councils of the towns, and board of aldermen of the cities, the local Boards of Health, which are required to make report to the State Board when called upon, as by chapter 83.

SEC. 6. The Secretary of the said Board shall make inquiry from time to time, of the clerks of town and local Boards of Health, and practicing physicians, in relation to the prevalence of any disease, or knowledge of any known or generally believed source of disease, or causes of general ill health, and also in relation to the proceedings of said Boards of Health, in respect to acts for the promotion and protection of the public health, and also in relation to diseases among domestic animals in their several towns and localities respectively; and the said clerks of town and local Boards of Health, and the said practicing physicians, shall give such information, in reply to said inquiries, of such facts and circumstances as shall have come to their knowledge.

Town councils and boards of aldermen have also power to appoint other local Boards of Health, responsible to the appointing authorities, and with such power as the statutory local Boards are disposed to confer.

Some towns have so-called Boards of Health or Health Officers with limited powers by appointment of town council. The city of Providence has a Superintendent of Health.

There are also two independent or volunteer Sanitary Associations in the State.

4. No changes have been made in the Public Statutes during the year in regard to communicable diseases.

Very efficient laws in regard to small-pox have been in force for a number of years, and the disease has never been allowed to get any extension from the original cases.

No children are allowed to enter the public schools without efficient vaccination. The present Seeretary of the State Board of Health introduced a bill in the General Assembly fourteen years ago requiring the towns to furnish gratuitous vaccination annually, and five years ago, for compulsory vaccination previous to entering the public schools.

Town councils may define what may be considered contagious or infectious diseases within their respective limits, and the statutes give the councils large powers in the restriction and prevention of the same.

5. No changes have been made in the statutes in relation to vital statistics. Some towns have passed an ordinance during the year requiring a burial permit from the town clerk previous to the removal of any deceased body, for the purpose of obtaining more prompt returns of death.

We have not space for selections from the remaining papers of this class, in the present number.

REVIEWS.

ANNUAL REPORT OF THE SUPERVISING SURGEON-GENERAL OF THE MARINE-HOSPITAL SERVICE OF THE UNITED STATES FOR FISCAL YEAR 1882.

The first part of this book is occupied by the annual report of the Surgeon-General, John B. Hamilton, to the Secretary of the Treasury. Following this are tables giving statistics in regard to the Marine Hospital service, and then selected cases from the hospital practice. This latter section contains accounts of many very interesting cases, both medical and surgical. The first of these essays is on "Cases of Rheumatic Effusions in Joints Treated by Aspiration," written by Surgeon H. W. Sawtelle. W. H. Heath has prepared "Notes on the Heatonian Method for the Permanent Cure of Hernia." These notes were made upon 17 cases which he had operated. Twelve cases proved successful; two were failures; two improved, and one met with an accident and resulted badly.

H. R. Carter describes a case of "Stab-Wound followed by Artificial Anus," on which a successful operation was performed. Chas. E. Banks has an excellent and quite exhaustive article on "Aneurismal Varix," and describes a case in illustration. Cases of "Aneurism" are described by C. A. W. Wheaton, C. E. Banks and C. S. D. Fessenden.

T. W. Miller gives the history of a case of epithelial cancer which he removed, but which speedily recurred, and resulted in death.

The first of the medical cases discribed is one of "Molluscum Fibrosum," by A. C. Hamlin. It is well illustrated by a micro-photograph. An account is also given of "Three Cases of Small-Pox" by W. D. Stewart.

The next ninety pages contain reports of fatal cases with autopsies. These include cases of a great variety of diseases, and are of much interest.

In the Appendix is an account of the "Hygiene of Steamboats on the Ohio River," by Walter Wy-

man. He finds in most cases no provision made for quartering the deck hands and laborers on the boats. The results of his investigations into this subject are expressed in the following sentence: "The man who ships as ordinary seaman in a whaling vessel, bound for a three years' cruise in the Arctic seas, stands a greater chance of returning with his life and health than does he who labors for one or two cold, winter seasons upon the deck of an Ohio River stern-wheel passenger steamboat."

TABULÆ ANATOMICÆ OSTEOLOGIÆ. Edited a CAROLO H. VON KLEIN. Cincinnati Lithographic Co.

The object of this book is to furnish figures of all the bones of the human body on which the points of interest are plainly designated. There is no text except the names and explanation of the points referred to in each figure. The peculiarity of the volume is that from the title-page to the end it is in Latin, except one short page of introduction which is in English. The value of such a work depends wholly upon the accuracy of the plates in their detail. The figures are not uniformly good. In many, points are referred to that cannot be seen at all, and very many others that cannot be plainly seen. For instance, on Tab. III, showing "caput ab anteriori," the place where the "sutura coronalis" should be is designated, but none can be seen in the figure. The same thing is true of the "apertura anterior canalis maxillæ inferioris s. foramen mentale;" and very many more could be pointed out in other figures. The plates are not equal to those in Gray's Anatomy.

THE ESSENTIALS OF BANDAGING; With Directions for managing Fractures and Dislocations, for Administering Ether and Chloroform, and for using other Surgical Operations, and containing a chapter on Surgical Landmarks. Illustrated by 136 Engravings on Wood, By BERKELEY HILL, M.B., Lond. F.R.C.S., 5th ed., pp. 341. New York, J. H. VAIL & Co.

In the term "Bandaging" the writer seems to have hit upon a general title which he makes to cover all the minor surgical appliances and manipulations.

Many of the topics discussed are in no way connected with the use of bandages as in the chapter on drawing teeth, the use of catheters ophthalmology, etc.

The book is a moderately complete treatise on that large class of mechanical procedures embraced neither by the principles of surgery on the one hand nor in operative surgery on the other, and falling, therefore, into neglect at the hands of those students whose clinical advantages have heen curtailed. *Hospital Interne's Guide* would have been an accurate title for the work. It does in fact furnish in an admirably clear and simple form many chapters of practical information which will go far towards making up the deficiencies of those who have lacked hospital advantages.

It is growing more patent each year that the success of all surgical procedures depends largely upon the perfection of the minutiæ of preparation, operation and after-treatment. This result inevitably follows the development of specialties within specialties in large cities. It is in the knowledge of these minute details in which chiefly the educated general practitioner feels his deficiency, and, as these minor though essential particulars of modern surgery are being yearly improved in the hands of practical men, he feels more or less helpless in trying to keep up to the latest improvements in a wide range of diverse specialties.

Precisely the wants of such persons are attended to in the above work. The author has had the good sense to adopt a practical as opposed to a "systematic" arrangement of his topics. Elaborate and theoretical bandages with queer, obsolete names and many tails—bandages which look well only on a healthy limb, or a manikin before a class, are banished as they should be—and clear, concise and adequate directions are furnished for adjusting and dressing each of the fractures and dislocations, after the most approved method, or methods now known.

The elementary lessons describing the names and uses of bandages, and the bandaging of different regions are simplified and condensed so as to occupy but twenty-five pages of the three hundred and forty one pages composing the book.

Careful instructions follow in the use of eye and ear syringes, the care of bed-sores, of hot and cold baths and irrigation, of trusses, of leeches, cupping, drainage tubes and issues.

The various anæsthetics and their means of administration are described. Full directions for antiseptic draining, the best methods of employing boracic acid, iodoform and chloide of zinc, and how to apply Leoitir's tubes will be found in the fifth chapter. A considerable portion of the book is occupied with a description of the surface guides (surgical landmarks) of the various regions, and in an appendex are complete tabulated lists of the instruments and other apparatus necessary for each of the more common surgical operations.

The author very properly lays stress upon the value of carbolized oil (1 to 10 or 20), which although very early advocated by Lister, for a variety of purposes has not been properly appreciated in America.

The book is to be commended for its fairness in expressing not only English but American methods of practice and is worth the examination, not merely of students, but of nearly every physician who has to deal with surgical cases.

OBSERVATIONS ON THE MANAGEMENT OF ENTERIC FEVER, ACCORDING TO A PLAN BASED UPON THE SO CALLED SPECIFIC TREATMENT. Read before the College of Physicians, of Philadelphia, January 3, 1883. By JAMES C. WILSON, M.D., Physician to the Jefferson Medical College Hospital, and to the Philadelphia Hospital. Extracted from the Transactions of the College of Physicians, 3rd Series, Vol. VI.

This is the title of a neatly printed pamphlet of only thirteen pages, but containing matter of interest concerning the treatment of one of the most common and important diseases with which the practitioner

has to deal. That the expectant and alcoholic treatment of typhoid fever which has predominated in the profession during the last twenty years is unphilosophical, and attended by a ratio of mortality altogether higher than it would be under any system of treatment founded on the rational indications afforded by a study of the clinical history and pathological changes developed by the disease, we have had occasion to point out many times, and to demonstrate by reference to statistical results. It is therefore in accordance with the natural tendencies of the human mind, to pass directly from an unsatisfactory expectancy to a search for specifics. It is in obedience to this tendency that during the last decade we have had in succession the treatment by cold baths, heroic or anti-pyretic doses of quinine, salicylic acid, digitalis; and finally mercurials, iodine, and salicylate of bismuth, as specifics.

That calomel can be made useful in the treatment of the early stage of typhoid fever by its judicious administration in the early stage, was demonstrated by the common practice of the mere skillful part of the profession, half a century since.

That iodine, not as a specific, but as a general alterant is well calculated to counteract the universal molecular derangements existing in this fever, is capable of being so administered as to very favorably modify the progress of the disease, has been demonstrated by myself and others during the last two years. But our present object was simply to call attention to the specific plan recommended by Dr. Wilson in the paper before us, which is as follows:

So soon as the patient is found to have enteric fever, or, in many instances, so soon as his symptoms warrant a reasonable suspicion that he is about to develop it, he is put to bed, ordered a diet consisting of milk, animal broths, jelly, and simple custards, in small amounts, and at intervals of two or three hours. At night he is given a dose of calomel. This dose varies in amount from 7½ to 10 grains (0.5 to 0.66 gramme), and is repeated every second evening until three, or rarely four doses have been administered in the course of the first six or eight days. It is given alone or in connection with sodium bicarbonate. There is probably a slight increase of diarrhœa, if it be present, without aggravation of the other symptoms, and in some instances the tendency of the temperature at this time to steadily rise, appears to be controlled. If, as is frequently the case, spontaneous diarrhœa has not occurred in the first week, the calomel usually brings about two or three large evacuations on the day following its administration, not more. In either case, the tendency to frequent passages in the latter stages of the attack is favorably influenced by the repeated administration of this drug during the first week. If the case does not come under observation until after the tenth day, one only, or at most two doses of calomel are given. No further doses of it are, however, given during the course of the attack, unless constipation occur. In this event, if the evidences of extensive or deep implication of the intestinal wall, such as abdominal pain, tenderness, or marked tympany are absent, calomel in 7½-grain (0.5 gramme) doses is given at intervals of three or four days. If there is reason to suspect serious intestinal lesions, the lower bowel may be more safely emptied of its contents every third or fourth day, by enemata of moderate size (8 to 10 fluid-ounces.) It is necessary to bear in mind that the gravest lesions of the gut, leading even to hæmorrhage and perforation, have occasionally been observed in cases characterized, not only by constipation, but also by an entire absence of pain or tenderness, and very moderate tympany. The danger of salivation from calomel in these doses in enteric fever appears to be slight. In only one case in sixteen were the mercurial fetor and slight swelling of the gums observed.

Excessive diarrhœa has been controlled by the use of opium, either in suppositories, containing 1 grain (0.06 gramme), or by the mouth in quarter-grain (0.016 gramme) doses, often associated with bismuth and given *pro re nata*. It is an invariable rule that the patient be kept in the horizontal position and to the use of the bed-pan and urinal, from the time of the recognition of the disease until defervescence is completed. He is, however, turned upon his side from time to time, and made to maintain that position for twenty or thirty minutes, if necessary, being supported by the nurse.

From the beginning of the attack the following mixture is regularly administered in doses of one, two, or even three drops, in a sherry-glassful of ice-water after food, every two or three hours during the day and night.

℞.	Tinct. iodinii,	f℥ij.	8	oo c. c.
	Acid. carbolici liq.	f℥j.	4	oo c. c.
	M.			

Unless some unusual circumstances occur to render a change necessary, this medicine is not suspended until the attack draws to a close. It is well borne by the stomach and excites no repugnance on the part of patients. In one case only has it been necessary to omit the carbolic acid on account of the disgust caused by its odor.

Partly for the sake of its favorable influence upon the skin and for the sake of cleanliness, partly because of its favorable though slight influence upon the temperature, the patient is to be sponged twice a day with equal parts of aromatic vinegar or alcohol, and cold water. If it is more grateful to him, this sponging may be done with tepid water, the evaporation of an extensive film of water not below the temperature of his body probably being not wholly without a refrigerating tendency.

When the evening axillary temperature reaches 104° F. (40° C). quinine in massive doses, 24 to 30 grains (1.66 to 2.00 grammes) is given upon a falling temperature. I usually direct 8 to 10 grains to be given in solution at 5, at 5:30, and at 6 A. M. the following morning. Administered thus at the decline of the temperature in its diurnal revolution, these large doses of quinine depress it from 2.5° to 3.5° F. (1.4° to 1.8° C.). After the lapse of forty-eight to seventy-two hours, if necessary the dose may be repeated. If these doses be rejected by the stomach—an unusual circumstance—half the quantity of quinine may be administered hypodermically. For this purpose a citric acid solution is to be pre-

ferred. Since the adoption of the plan of treatment under consideration, I have not encountered cases attended with such hyperpyrexia as has rendered attempts to control it by cold baths necessary or even advisable.

The minor nervous symptoms are best held in check by skilful nursing. For the relief of the headache of the first ten days absolute quietude, a dim light, etc., are often sufficient; occasionally the bromides alone or in combination with chloral are required. Later in the course of the disease chloral is unsafe. From the end of the first week the patient cannot be left unattended even for a few minutes, without risk. Persons in whom delirium was only occasional and transient, have in many instances destroyed themselves during the momentary absence of the nurse.

The considerations which led me to adopt the plan of treatment indicated in the foregoing sketch, are:

1. A feeling of dissatisfaction regarding the expectant method of treating enteric fever. This feeling, vague at first, grew more definite and stronger with increasing clinical opportunities, and a fuller knowledge of the natural history of the disease, until it became a motive, impelling me to cast about for some different and more satisfactory plan. This feeling has been, during the past decade, a very general one in the profession in all parts of the world, as is attested by an almost endless succession of journal articles setting forth new plans of treatment, and the use of new drugs in the management of this, the most common and most important of the acute infectious diseases of the present epoch in medical history. Most of the plans thus suggested have led to disappointment when tested by the fuller observations of the profession; many of them have failed to attract general attention, and some few are still *sub judice*. Their number and diversity bear witness to a widespread distrust of the once well-established expectant treatment. This distrust is, however, based upon something more tangible than a mere feeling of dissatisfaction. The statistics of all observers whose cases have been sufficiently numerous to be trustworthy, show enteric fever to be, when treated by the expectant plan, a disease of high death-rate.

The percentage of fatal cases rarely falls below 15 per cent., and often exceeds 25 per cent., according to the hospital records of this country, Great Britain, and Continental Europe. Jaccoud, with a collection of 60,000 cases, observed a mortality of 20 per cent., Murchison, in 27,051 cases, 17.45 per cent.; Liebermeister, in 1718 cases, at Basle, under an expectant plan, records 27.3 per cent. of deaths. But turning from broad generalizations to personal experience, who is there here that, many times elated by the happy issue of mild or average cases treated by the expectant plan, has not realized the sense of utter powerlessness attending it when he has stood face to face with cases in which *to do*, rather than *to wait*, has been necessary to save life.

2. Enteric fever is the very type of the general diseases, of affections *totius substantiæ*. The tissues are universally implicated in the morbid processes; no function of the body wholly escapes perturbation. For this reason, plans of treatment suggested by the prominence of certain groups of symptoms, or by the known lesions of particular organs, even though of undoubted benefit as far as they go, are in theory unsatisfactory, because they are directed in effect against conspicuous manifestations of the cause of the sickness, rather than against the cause itself.

Whilst in actual practice the treatment by turpentine, by alcohol, by opium with lead, or the silver nitrate, or by agents capable of controlling the febrile movement, as quinine, digitalis, salicin, and the salicylates, even the cold-water treatment itself, although at times and in the hands of certain clinicians showing favorable results—all these have failed of general acceptance on the part of the profession.

3. The general character of the disease, the specific nature of its cause, the unsatisfactory results alike of an expectant and of a symptomatic plan of treatment, or rather of the two combined, have united to render the idea of a specific treatment, a true cure for enteric fever, a most attractive one, to stimulate thoughtful observers to renew again and again the disappointing search for it. To this idea may be traced the treatment by the mineral acids, by chlorine-water, by carbolic acid, by quinine alone, by quinine and digitalis, by iodine, by the potassium iodide, by calomel.

4. Not only is the conception of a specific treatment for specific diseases a most attractive one, and the attainment of such a treatment for enteric fever brought within the bounds of a reasonable hope by the analogy of syphilis and the malarial diseases, but the search after it with due caution and judgment has also the warrant of the very highest medical authority.

The *total number of cases treated* by this plan is sixteen; all recovered, one being now in the second week of convalescence.

Of these, eight were severe, the temperature reaching or exceeding 104° F. (40° C.).

Of these eight severe cases, one was characterized by uncontrollable vomiting, in the third week. The patient retained no food taken by the mouth for five consecutive days.

One case was very irregular in its course, and was complicated by an obscure abdominal abscess which discharged by the bowel. The temperature in this case on two occasions attained 105° F. (40.5° C.). This case presented the characteristic eruption of enteric fever.

A third case was prolonged by a severe relapse.

Of the eight cases in which the observed temperature did not at any time attain 104° F. (40° C.), and which were therefore looked upon as medium or mild cases, one was complicated hy crural phlebitis, and another by the occurrence of tntestinal hæmorrhage.

The average duration of the eight severe cases was about 31 days; that of the eight mild and medium cases was about 25 days.

Of the whole number ten were treated in hospital, six in private practice. All from the time of their coming under observation were under my personal care.

MEDICAL SOCIETY PROCEEDINGS.

At the late meeting of the American Dermatological Association, held August 29 to 31, at Sagamore House, on Lake George, Dr. Piffard, of New York, read a paper on the treatment of acne. Ætiology, he declared, was the main thing to be examined into. In acute cases the calx. sulphurate in small doses was thought to be excellent; also bromide of arsenic. Locally hot water applications were recommended; sometimes a weak belladonna or stramoniun ointment proved beneficial. In chronic cases the sulphide of calcium must be pushed. In some ergot, and in others the bichloride of mercury prove useful. Dr. Graham, of Toronto, presented a paper on Exfoliative Dermatitis. He thought the disease more common than is usually supposed. He recognized two varieties, one he called dermatitis exfoliativa rubra, the second dermatitis bulbosa et exfoliativa. Dr. Stelwager read a paper on Impetigo Contâgiosa. He had examined a great many cases, but failed to find in the vesicles any fungus such as has been described by Kaposi and Piffard. Micrococci, such as are to be seen in pustular eczema he discovered, but none of the supposed characteristic fungus, except in a few dried crusts. He regards the disease as an acute systemic affection, capable of auto-inoculation; as not parasitic; not related to vaccinia, but a distinct and separate disease.

Dr. Atkinson, of Baltimore, read a paper on a case of Multiple Cachectic Ulceration. It occurred in a child. At first there was some itching and papulation, then vesiculation, and finally ulceration, which extended down to the bone. There was much debility, but not a great deal of pain. Tonics, it was thought, were indicated. Prognosis was good, although deep scarring was liable to occur.

Dr. Van Harlingen read a paper on the use of naphthol. He thought it useful in scabies, somewhat so in psoriasis, but of little use or hurtful in eczema.

Dr. Fox described a trip to the leper settlement at Tracadie. There were there twenty-four lepers. Three cases he thought were not leprosy. The patients, although receiving no medical treatment, were well cared for. In regard to the disease, he said that on account of its rapid spread at times through communities, it could not be transmitted by heredity alone. He thought, that like syphilis, it was directly contagious. In the way of treatment much has been accomplished, in some cases by the use of large doses of nux vomica, internally, and shaulmoogra oil, externally.

A paper on Paget's disease was read by Dr. Sherwell. There was in these cases burning and itching, like eczema. The nipple was gradually obliterated; its retraction, when it occurred, could not be distinguished from cancer. Its malignant papillary character distinguished it from eczema. The duration of one case observed by the author, was over twelve years, and a second lasted longer than the time assigned to it by Paget.

Dr. Morrow, of New York, read a paper on the Pathogenesis of Drug Eruptions. He described the various theories that have been offered to explain their origin. He himself thought they were due to a neurotic action.

Dr. Taylor, of New York, described the Polymorphous Changes Observed in the Tubercular Syphilide, and illustrated the subject by a number of colored photographs.

In a paper by Dr. Sherwell, of Brooklyn, the belief is expressed that pseudo-psoriasis of the palm is indication of a syphilitic taint, and he related a case in example. Dr. Alexander, followed, with a paper describing cases in which no syphilitic taint could be detected.

A paper was then read which had been written by Dr. Hyde, of Chicago, on the Coincidence of Syphilitic and Non-syphilitic Affections of the Skin.

Dr. Taylor, of New York, described a peculiar appearance of the initial lesion of syphilis. He had had opportunity to examine several cases from the very beginning. In two he noticed first one or more spots quite small and silvery-white, looking as though they might have been caused by touching the mucus membrane with the tip of a crayon of nitrate of silver. A few days later a papule devclops, and then the typical chancre. In other cases there first appears a round, excoriated spot, quite minute and dark-red. In still other cases the papule siche of French authors, first appear. A paper from Dr. Duhring, was read on cases of Lupus Erythematosus, which was greatly helped by the following formula,

℞ Zinci Sulphatis:

Potasii Sulphureti	āā ʒ ss.
Aquæ Rosæ	ʒ iii ss.
Alcoholis	ʒ iii.

The surface to which this is to be applied should be first thoroughly cleansed of crusts, etc.

A second paper, by the same author was read, on Ainhum, with microscopic examinations, which went to show that the member had been strangulated by a cord or other means, applied intermittingly.

Dr. Hardaway, of St. Louis, described a chronic papular eruption, which occurred mostly in children. It was characterized by its dull, light yellow color, its psudo-vescicular appearance. Usually each papule is about the size of half a pea. It is slightly itchy. Spontaneous recovery occurred.

Dr. Graham, of Toronto, described a case in which there was a peculiar new growth on the skin of the fore arm. It resembled elephantiais or lymphangioma. It is of very rapid growth, now hanging like a bag from the arm. When the limb is raised it diminishes much in size. He thought it a dermatolytic outgrowth with dilatation of the lymph channels.

The following are the officers for the ensuing year: Dr. R. W. Taylor, of New York, President; Dr. A. Van Harlingen, of Philadelphia, and Dr. J. E. Graham, of Toronto, Vice-Presidents; Dr. W. Alexander, of New York; Secretary; Dr. G. H. Rohe, of Baltimore, Treasurer. The next meeting will be held in September, 1884, at West Point.

DR. FISCHER, a Privat-Docent, has been appointed extraordinary Professor of Surgery at Strassburg; and Professor E. Baumann goes from Freiburg to Breslau as ordinary Professor of Physiology.

MISCELLANEOUS.

AMERICAN PUBLIC HEALTH ASSOCIATION.

We again call attention to the coming meeting of this important national organization by giving the following notice received from the Secretary—[Ed.]:

SECRETARY'S OFFICE—PRELIMINARY CIRCULAR.

12 Pemberton Square, Boston, }
July 16, 1883. }

The American Public Health Association will hold its Eleventh Annual Session at Detroit, Mich., commencing Tuesday, November 13, 1883, and ending Friday, November 16.

The subjects which have been chosen for special consideration at that time are:

I. Malaria. Its etiology and the methods for its prevention in localities or in persons; its American history; its specific particles; its origin; the conditions of its pervasion; its laws of extension, etc.

II. Foods. Their adulterations; healthy or deleterious modes of preservation and the function of legislation in regard to them. Ascertained facts as to adulterations in this country. Facts as to canned goods, condensed milk, artificial butter and cheese, prepared meats, etc.

III. Vital Statistics. Methods and results; defects apparent. How far foreign modes of tabulation are to be followed. Systems of collection and classification. Race vitality and the care of population as indicated by statistics.

IV. The Control and Removal of all Decomposable Material from Households. The mechanical laws, constructions and appliances relative thereto. The construction of all inside pipes and their connections, their traps and syphonage, flushing, ventilation. How they shall be connected with outdoor receptacles, and yet be free from ill effect.

The Executive Committee by this outline desires to avoid general dissertations on these subjects, and to secure facts and opinions as to practical methods of dealing with the interest of public health. Reasons for the views entertained, the results of experience and the best judgment as to preventive and restrictive measures are especially sought.

Methods and systems of Physical Education, drill, etc., feasible in the school-room, will be discussed. While papers of merit on other topics are by no means excluded, it is believed wise to concentrate the preparation of papers and discussion upon these topics.

The Special Committees on Compulsory Vaccination, the Management of Epidemics, and on Diseases of Animals, will, before the completion of their Reports, be glad to receive communications from any who have facts or opinions bearing on these subjects.

Active and Associate Members have the same consideration in the presentation of papers, and in discussion. Gentlemen who propose to present papers are respectfully requested to notify the Secretary by September 1, and to give the titles of their proposed papers.

The Executive Committee insists that a synopsis of the papers to be offered, and statement of the time required for reading, be sent to the Secretary by October 15, and that the paper complete be in the hands of the Secretary at least three days before the meeting, having been sent by mail or express either to his office at Boston, or care of Dr. Wm. Brodie, Detroit, Mich., after November 9.

The Executive Committee feels warranted in saying that the meeting promises to be one eminently inviting and profitable, and urges the attendance and cooperation of physicians, engineers, architects, teachers, and all those interested in the advancement of public health and physical well being.

Inquiries of a local character may be addressed to Wm. Brodie, M.D., Chairman Local Committee, Detroit, Mich.

A later circular, giving such detailed information as to local points, programme, transportation, etc., as may be available, will be issued in due season before the meeting.

If any member entitled to them has failed to receive Vols. VII or VIII of the Transactions (Savannah and Indianapolis meetings), the Treasurer, Dr. J. Berrien Lindsley, Nashville, Tenn., should be notified.

EXTRACT FROM CONSTITUTION. ART. III.

The members of this Association shall be known as Active and Associate. The Executive Committee shall determine for which class a candidate shall be proposed. The *Active* members shall constitute the permanent body of the Association, subject to the provisions of the Constitution as to continuance in membership. They shall be selected with special reference to their acknowledged interest in, or devotion to, sanitary studies and allied sciences, and to the practical application of the same. The *Associate* members shall be elected with special reference to their general interest only in sanitary science, and shall have all the privileges and publications of the Association, but shall not be entitled to vote. All members thall be elected as follows:

Each candidate for admission shall first be proposed to the Executive Committee in writing (which may be done at at any time), with a statement of the business or profession, and special qualifications of the person proposed; on recommendation of a majority of the Committee, and on receiving a vote of two-thirds of the members present at a regular meeting, the candidate shall be declared duly elected a member of the Association. The annual fee of membership in either class shall be five dollars.

By order of the Executive Committee.

Azel Ames, Jr., *Secretary.*

The following, as we learn from the North Carolina *Medical Journal*, is the gist of the new medical practice law of Mississippi:

It *requires that no person shall practice medicine until he shall have received a license, and registers; that a Board of Censors shall be established in each Congressional District to examine into the qualification of applicants;* the Board of Censors shall be composed of two sanitary commissioners, and if these disagree in their opinions about the qualifications, that the record of examination shall be forwarded to the Secretary of the State Board of Health to decide; that the examination of candidates shall be in writing, and that no discrimination shall be made against the applicant on account of the system of practice he may advocate; that applicants shall be examined only on anatomy, chemistry, obstetrics, materia medica, physiology, pathology, surgery, hygiene; that

the license when issued by the Board of Censors shall be registered; temporary license may be granted by the Secretary of the State Board of Health in the interval of the meeting of the Board of Censors, but no longer; that physicians now practicing shall receive license without examination upon showing certain requirements; applicants for license making false statements shall be adjudged guilty of a misdemeanor, and liable to $25 fine, and revocation of license; that "practice of medicine" shall be defined "to suggest, recommend, prescribe or direct for the use of any person, any drug or medicine, appliance or other agency; whether material or not material, for the cure, relief or palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound, fracture or other bodily injury, or any bodily deformity," for fee or reward, excepting females solely engaged in midwifery; that peripatetic quacks shall not be licensed; that judges shall give grand juries at every term a copy of this act; that to violate this act is a misdemeanor punishable by a fine of not less than $50, or more than $500, or by imprisonment in the county jail.

THE Pennsylvania and Maryland Union Medical Association held its sixth annual meeting near Chambersburg, Pa., on the 30th of August, Dr. W. W. Dale, of Carlisle, Pa., in the chair. It is composed of representatives from the medical societies of the counties of Franklin, York, Lancaster, Chester, Lebanon, Cumberland, Perry, and Dauphin, in Pennsylvania, and Harford and Cecil, in Maryland. Dr. J. L. Zeigler, of Mount Joy, was elected President for the coming year; Dr. S. B. Keefer, of Carlisle, and Dr. John Lineaweaver, of Columbia, Vice-Presidents; and Dr. S. J. Rouse, of York, Secretary and Treasurer.

IN the last issue, we called attention to the trouble that had arisen at the College of Medicine and Surgery in Montreal. Since then we learn that a telegram has been received from Cardinal Simeoni, at Rome, allowing the school to open as usual.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM AUGUST 31, 1883, TO SEPTEMBER 7, 1883.

Shufeldt, Robert W., Captain and assistant surgeon, granted leave of absence for three months on Surgeon's certificate of disability, with permission to leave the Department of the South. (Par. 3, S. O. 204, A. G. O., Septembér 5, 1883.)

Wakeman, W. J., 1st Lieutenant and assistant surgeon, assigned to temporary duty at Fort Sidney, Nebraska, (Par. 2, S. O. 92, Department of the Platte, August 28, 1883.)

NECROLOGICAL.

FORD, LEWIS DESAUSEURE, M.D., of Augusta, Georgia, was born at Washington's headquarters, Morristown, New Jersey, December 30, 1801, died at his residence in Augusta, August 21, 1883. Having received a good academical education, he studied medicine, and after attending the usual course of lectures, he received in 1822 the degree of M.D. from the College of Physicians and Surgeons of New York. The same year he removed to South Georgia, and thence to Augusta in 1827. Dr. Ford assisted in organizing the Medical College of Georgia in 1832. He was elected to a professorship in the institution, and has held a chair in it up to within the last two years, when he resigned. He has held at different times the chair of Chemistry and that of Practice. He was learned, popular, and practical. He was laborious and painstaking in all his work, and beloved by all who knew him. He was at the same time one of the oldest physicians and oldest citizens of Augusta. His portrait adorns the City Hall in recognition of his having been a worthy Mayor of Augusta. Doctor Ford contributed some valuable papers on paroxysmal fevers, as seen in the South between the years 1836 and 1845, and published in the *Southern Medical and Surgical Journal*, and are frequently referred to by writers. He was a member of the Georgia Medical Society. He attended the meetings of the American Medical Association in 1849 and in 1851. He leaves a wife, three sons and three daughters. Two of his sons are members of the profession which their father adorned, and labored so zealously to advance in usefulness and dignity. Dr. Ford's funeral took place from St. Paul's Episcopal church, and was very largely attended. The City Council and the medical profession attended in a body.

J. M. T.

RAINES, THOMAS R., of Atlanta, Georgia, was born in Bibb county, Ga., in 1833; died, after a brief illness, at his residence in Atlanta, August 31, 1883. The doctor was descended from one of the oldest families of the colony and the State. He received a good preparatory education, and was well grounded in his profession, and actively and profitably employed in it when the war broke out. Dr. Raines entered the military service of the Confederacy, and devoted himself to the relief of the suffering of his companions until the cause went down at Appomattox. Broken in health and in fortune, he returned to his State and took up a residence and large practice at Atlanta, and by his worth and devotion to its duties soon acquired business, and the confidence and respect of the community. Gov. Colquitt, during his first term of office, appointed Dr. Raines physician to the State Penitentiary, an office which he filled, with credit to himself and to the satisfaction of the Governor, until his death. The doctor leaves a wife, two daughters, and several sons. He was a member of the Atlanta Academy of Medicine, the State Medical Society, and of the American Medical Association since 1880. Dr. Raines was extensively known throughout the State, and regret for his death, both as a citizen and a physician, is very general. His funeral was attended by the "Gate City Guard," of which company he was surgeon, and by a large concourse of friends and citizens.

J. M. T.

—THE—

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. I. SATURDAY, SEPTEMBER 22, 1883. NO. 11.

ORIGINAL ARTICLES.

EPIDEMIC JAUNDICE AMONG CHILDREN.

BY ALEX. Y. P. GARNETT, M.D., EMERITUS PROFESSOR OF CLINICAL MEDICINE IN THE NATIONAL MEDICAL COLLEGE, WASHINGTON, D. C.

[Read in the Section on Diseases of Children, June, 1883.]

During the summer of 1881, remarkable for its unprecedented heat as well as an unusual and widespread development of malarial fever, embracing sections of the United States rarely if ever before visited by this supposed pathogenic agent, an epidemic of acute jaundice, confined almost exclusively to children under six years of age, appeared in the city of Washington. Between the 2nd of July and the 15th of October six cases of this disease occurred within my own practice, the ages of those attacked ranging from two to six years. For the months of July, August and September twelve other cases were reported to me by other physicians, three within the service of the Central Free Dispensary, the other nine occurring in localities remote from each other, but exhibiting in every essential particular the same features as those which came under my immediate observation. It will be observed that all of these cases occurred within the limited period of three months, when the range of temperature had reached, and probably sustained for many weeks, its maximum point of elevation; but, so far as I have been able to ascertain, none of them were found in those parts of the city supposed to be especially exposed to the influence of malaria or any other mal-hygienic conditions, militating in this respect directly with the theory that the disease owed its origin to any limited local cause. Whilst I have, in common with most of those who have pursued the practice of medicine in Washington for many years, repeatedly met with sporadic cases of catarrhal icterus in both adults and children, it has not hitherto occurred to me to meet with this disease in the form of an epidemic confining its attacks exclusively to young children, a fact which cannot fail to materially enhance its importance in the estimation of the pathologist, as well as the general practitioner of medicine. In the elaborate treatise of Von Scheuppel on biliary diseases, found in the seventh volume of Zeimssen's Encyclopædia, we find but one recorded epidemic of icterus catarrhalis confined to children alone, reported by Rhea. Legg, in his admirable work on the bile, jaundice, and biliary diseases, after tracing the first mention of epidemic jaundice to Hippocrates, devotes three pages of his work to the bibliography of this disease, embracing a period from 1742 to 1872, describes but two epidemics of jaundice confined to children—one at Essen in 1772, reported by Brüning, and one in 1870 at Hanau, by Rehm. During the same period he reports fifty-six epidemics of the disease which occurred among adults. Sir Thomas Watson mentions an epidemic affecting young girls only, and other writers report similar epidemics in which men alone were attacked. It is possible, however, that in this latter instance such conclusions were drawn from observations made at garrisons and camps chiefly occupied by soldiers, the relative number of males and females being too disproportionate to entitle such testimony to much credit. It is to be regretted that in so elaborate and exhaustive a work as that of Legg, embracing the general history of jaundice, its ætiology, symptomatology, pathology and treatment, he should have failed to describe in detail the clinical features which characterized so interesting and rare a manifestation of the disease, as the two epidemics he mentions which were confined to children. He seems to have limited himself to the mere mention of the fact, simply giving name of authors, with the date and locality of the epidemic invasion.

In presenting the history of the epidemics to which the title of this paper refers, I do not propose to include a full description of the symptoms, progress and treatment of each particular case that came under my treatment. It is believed that a very adequate conception of the disease may be conveyed by a detailed exposition of those peculiarities which characterized in a well-defined manner a single typical case. Whilst but six of the cases above referred to occurred within my own practice and came under my immediate notice through each successive stage, I am led to believe that those reported to me by other physicians presented in every essential particular the same clinical features, and may be correctly represented by a report of the following typical case.

CASE I.—A little girl of five years of age, of delicate constitution; nervous temperament; appetite at all times feeble and capricious; subject for the last three years to occasional attacks of malarial fever of short duration, came under my care on July 2, 1881, having been attacked with fever on the previous evening. At the hour of my seeing her, 11 A. M. July 2, she had a pulse of 102; temp. 101.6; headache; tongue slightly furred; bowels torpid;

great repugnance to food; restless and nervous. Prescribed the following powder:

℞. Hydrarg. C. Mit.....gr. iv.
Sacchr. Alb.....gr. xx.
M. ft. chart No. iv.
Sig. one every hour.

Bath at 85°; to be kept in five minutes. Milk diet exclusively. If bowels are not moved in an hour after the last powder, an enema of cold water must be administered.

July 3, 11 A. M. Bowels have beeen twice moved without the aid of an enema. Sleep through the night frequently interrupted; complains of headache. Pulse 92; temp. 99.4; skin dry, and no appetite; discharges from bowels of a greenish-brown color, resembling in this respect those produced by calomel.

℞. Quiniæ bisulph.....gr. xij.
Elix. glycyrrhizæ.....j℥i.

M. Sig. Dessertspoonful every hour, unless it produces nausea, until the whole has been taken. If temperature ranges up and skin is dry within two more hours to be placed in a bath of 80°, and kept in five minutes. Milk diet.

7 P. M. Fever has continued all day. Quinine seems to have increased rather than diminished temperature. Pulse at this hour 108; temp. 102.5. Sponge body every hour unless temperature declines, with vinegar and water equal parts, at a temperature of 70°. If restless and unable to sleep, give potass. bromide, gr. vi, aquæ f.℥ss, well dissolved, and repeat in two hours if necessary. Milk diet exclusively.

July 4, 11 A.M. Slept at intervals through the night, with some decline of fever after 12 M. Took milk and retained it, about 2 oz. at a time four times from 10 P.M to 8 A.M. Dose of bromide of potassium was not repeated. Sponging was also omitted after midnight. At this hour—11 A.M.—pulse 94, temp. 99.2°. Complains still of headache, and some nausea; has repugnance to food, and presents for the first time a decided icterode appearane of skin and conjunctivæ. Urine scant and high-colored. Omit all medicine and give iced gum-water slightly acidulated with lemon juice. Bath at 12 o'clock of 75°. No ingesta until seen again except the iced gum-water. If the temperature increased, renew the sponging as heretofore. 6:30 P.M. Jaundice appearance more marked. Nausea distressing. Pulse 104, temp. 100.8°. Skin dry. Urine abnormally diminished and deeply tinged with bile. Has had one feculent evacuation from the bowels since yesterday, of a light color, possibly occasioned by the exclusively milk diet. Apply compress wet with cold water constantly to thé epigastrium and administer an enema of 4 oz. of cold water at a temp. of 65° every four hours, unless the bowels are moved; in that event omit the enemata. Give iced milk with one-third lime water in dessertspoonful quantities every half hour. An examination of the urine disclosed the presence of biliverdine and bilirubine, and demonstrated beyond question the true nature of the disease.

July 5, 11 A.M. Headache, fever and nausea continue, with the jaundiced appearance of the skin slightly intensified. Pulse 104; temperature 102.4°. Has retained a small quantity of the milk and lime water; no attempt made to give anything else. Directed the cold compress to be continued with water at temperature of 60°. A cold-water enema (temp. 65°) to be administered every four hours if no peristalsis was provoked by its presence. Small quantity of albumen of egg whipped up given with scraped ice, teaspoonful at a time, in addition to the milk and lime water, if retained by the stomach. 6:30 P.M. But little change in general condition since morning visit. Slight increase of temperature and pulse; has retained the iced albumen and a small quantity of the milk. Two small evacuations from the bowels, showing a deficiency of bile. Complains still of the headache, but slept about two hours through the day. Omit after 8 o'clock the enemeta of cold water and the wet compress. Give an enema at 9 P.M. of potass. bromide gr. x, mucilage gum acaciæ ℥ss, to be repeated in three hours if she does not sleep. Continue the same nutriment through the night when she is awake.

July 6, 11 A.M. Patient slept more continuously through the night after the second enema of bromide had been administered, and retained both the milk and albumen when given. This morning some abatement of fever. Pulse 92; temperature 99°. Headache continues, but less severe. Repugnance to food still present, but complains only of nausea when importuned to take nourishment. Slight tenderness on pressure over epigastrium and hypochondriac regions. Bowels have not been disturbed since yesterday, and some increase in quantity of urine, which, however, retains its deep bilious color. Continue sponging with water at a temperature of 80° every hour if not asleep, and add half a teaspoonful of Valentine's meat juice to each spoonful of the milk and lime water, if not rejected by stomach. 6:30 P.M. No material change since morning. Pulse increased two beats, and temperature elevated half a degree. Headache still present, and no increase of nausea. Has passed about four ounces of highly colored urine. Continues to manifest an insufferable repugnance to food or any ingesta; observedly reduced in flesh and strength; somewhat restless and irritable. Administer 8 P.M. the enema of potass. bromide in same strength as ordered last evening, and persist with the milk, lime water and meat juice, adding ten drops of brandy to each teaspoonful given every hour when awake.

July 7, 11 A.M. Condition of patient this morning the same in most respects as at this hour yesterday; perhaps less repugnance to food. Pulse 100; temperature 99.8°; one small semi-fluid motion from the bowels during the night, indicating no increase of biliary elements; passed since last evening's visit up to the prssent hour ten ozs. of urine somewhat improved in color; some headache, but no nausea. Give two teaspoonfuls of the milk and meat juice with twenty drops of brandy every hour. A bath of 80° at noon, and remain in it four minutes. Apartment to be well ventilated, and temperature as low as practicable. 6:30 P.M. Has retained the nourishment through the day. Temperature and pulse very

slightly increased. Passed six ozs. of urine through the day, and slept at intervals aggregating about one and a half hours. Complains yet of headache; no nausea; icterode appearance of skin unchanged. Bath of 80° at 10 P.M., and continue the milk and brandy as directed this morning; to repeat the bromide enæma during the night if she does not sleep without.

July 8. With the aid of the enema of bromide slept almost five hours through the night. Took the milk, brandy and meat juice when awake without discomfort or resistance. Temperature 98.8°; pulse 98; no disturbance of bowels. About eight ozs. of urine passed through the night, but little changed in color. Jaundiced hue of skin and conjunctivæ perceptibly diminished. Complains of no nausea or headache, and exhibits a slight but decidedly improved general condition, but expresses as yet no desire for food. Administer cold water enema at 12. Continue the same nutriment in tablespoonful doses every two hours if no indications of intolerance by the stomach. If temperature rises before afternoon visit, sponge with vinegar and water at temperature of 75° every half hour for three minutes at a time. 6:30 P.M. There has been no rise of fever since morning. Aspect of patient manifestly improved. Bowels moved by the enema, and kidneys acting satisfactorily. Has taken her nourishment through the day without opposition; more composed, and observant of things around her. The treatment for the night the same as that directed for last night. The bromide enema to be omitted, unless absolutely needed by restlessness and inability to sleep. From this date the little patient continued to improve slowly for several days, but steadily, convalescence being fully established by the twelfth day from date of attack.

Whilst the clinical history here presented of an epidemic of this peculiar and unusual character cannot fail to arrest our attention, viewed in any of its aspects, the especial features calculated to awaken interest and invite investigation will be found in the study of its ætiology and pathology. A review of the foregoing report of a purely typical case shows that the epidemic occurred in mid-summer when we had encountered an unusual and protracted period of high temperature, that the cases continued to develop from the 2d of July to the middle of October, when the systems of those exposed to this continued heat had become thoroughly insolated and an opportunity afforded for the liver and other large glands concerned in the function of digestion, located in the abdominal cavity, to become deleteriously impressed, and materially impaired in functional activity, constituting, in my judgment, an important causative factor in the development of this epidemic. That there must have been some other pathogenic agent co-operating in the cases of these particular children, who were the subjects of attack, to produce the disease is not to be denied, since but a small proportion of those exposed to the same degree of heat and general surroundings were affected. The direct connection, however, between the period occupied by the epidemic and the extraordinary high temperature which prevailed at the time, would go far when considered in connection with the acknowledged morbid influence of protracted heat upon the function of the liver, to establish the apparent relations of cause and effect in this particular epidemic manifestation of hepatic derangement. That the occurrence or production of jaundice is closely related to heat will not be positively denied, since its frequent development in hot climates and comparatively rare appearance during the winter season in the temperate zone, sufficiently attests this fact, notwithstanding the contrary statements made by many authors who have written upon the subject. To my mind those epidemics reported by different writers as having occurred in the winter season in temperate climates furnish no contradiction to the opinion above suggested, that heat constitutes an important and active agent in the production of jaundice. A litttle reflection will show that in all such instances referred to by those writers, the subjects of the attack had most probably during the preceding months of summer been exposed to the chances of insolation and their systems, in part, prepared thereby for the subsequent development of the disease. I confess that I fail to find anything in the reports of those epidemics which would induce me to eliminate from the active causes of epidemic jaundice the important and potential one of heat. In discussing, however, the ætiology of this particular epidemic, it is not necessary that I should refer to the numerous and manifest causes of jaundice which have been embraced in the catalogue of ætiological factors by writers upon the subject. Each epidemic reported having been attributed to some specific or local cause and therefore inapplicable, so far as the views expressed by the different authors of these reports are concerned, to the one which furnishes the subject of this paper, I say inapplicable for the reason that it is not proposed to discuss the subject of jaundice in its general character, embracing its relations to the numerous pathological conditions with which it is often associated as cause and effect, such an effort would necessarily lead us into a broad and limitless field of speculation and debate far beyond the narrow limits prescribed for this monograph. Confining myself, therefore, to a consideration of this specific epidemic, and eliminating the numerous well recognized causes of sporadic or general jaundice, I shall briefly refer to the suggestions already thrown out as to the special causal agent which operated in a more or less potential degree to produce it. That the genesis of jaundice is in some way dependent upon hepatic agency seems to be an admitted fact both by ancient and modern writers. In what particular manner or mode this agency is exercised appears, however, to have furnished a subject for endless controversy and discussion, and presents at the present time difficulties which the modern advances of organic chemistry and practical skill and progress in the use of the microscope seem rather to have enhanced than removed. The short period allowed for the presentation of this paper does not permit even a passing notice of the numerous and diverse theories which have been advanced, although they

may represent the views entertained by the most distinguished and progressive of our modern pathologists. I am, therefore, constrained to confine myself to a brief exposition of such crude explanatory hypotheses as have occurred to my mind regarding the modus operandi of hepatic influence in the production of this particular epidemic.

Among the numerous causes of jaundice reported by authors, we find mentioned gastro-duodenal catarrh, extending into the bile ducts, producing in various ways obstruction to the escape of bile; diminished circulation of blood in the liver, and a consequent abnormal diffusion of bile; and diseases of the *nervous system*. That jaundice is frequently produced by the first mentioned cause, no pathologist of the present day will deny. The primary morbid impression having originated in such instances in gastric or gastro-duodenal catarrh is readily transmitted along the lining membrane of the "pars intestinalis" of the common duct to those of the gall bladder and liver, resulting in obstruction and a diffusion of bile pigment in the general circulation. I am not prepared to admit, however, that the epidemic under consideration could have originated in any such manner. The clinical history above detailed militates directly with such a theory. By reference to that, we find that the icterode appearance of the skin conjunctivæ and other positive manifestations of diffusion of bile pigment in the general circulation, antidoted the symptoms of gastric disturbance, and as the nausea and repugnance to food became the most pronounced features of the case, we are justified in concluding that no irritation of the stomach or duodenum existed prior to the development of these two significant symptoms, and consequently such irritation must be regarded as a consecutive rather than a primary element in the case. I therefore do not hesitate to discard this mode of invasion of the disease in considering the ætiology of the epidemic. Whilst the theory that catarrhal inflammation of the bile ducts is the most common cause of jaundice, and certainly seems the most popular one with writers and practitioners of the present day, when we consider, in addition to the reason above assigned, the great variety of other causes found to occasion a diffusion of bile pigment in the blood and the peculiar icterode appearance of the skin, entirely independent of any morbid condition of the larger bile ducts, we find no difficulty in recognizing the theory of mechanical obstruction as inapplicable in this case. In further support of this view, we may cite instances of jaundice produced by poisons, traumatism, bites of serpents, icterus neonatorum. Jaundice produced by nervous influences, excessive secretion of bile in which that fluid not having undergone decomposition or oxydation, as suggested by Murchison, and eliminated through the kidneys and lungs, as in health, is taken up in its normal state and carried along with the blood to the tissues.

Reverting to the influence of the nervous system as one of the causative agents in the genesis of jaundice, it seems to me that we here have a probable solution to the ætiological difficulty in determining the origin of this epidemic. That the function of hepatic secretion, as well as that of other glands, is directly controlled by and under the dominion of the nervous system, no one will deny; and that this controlling power of the nerves is frequently exercised under the emotions, is equally true. This is abundantly shown by the excessive lacteal secretion of the mother at the sight of her suckling infant, the augmented salivary secretion by the savory odor of food. Not only is this influence of the nervous system over the function of secretion thus quantitatively demonstrated, but under certain mental excitements or morbid impressions the function becomes qualitatively deranged and deleterious to the animal economy. We see this manifested by the effects of grief upon the mammary secretion of the nursing mother; the influence of anger upon the saliva of animals, transforming a harmless secretion into an active poison. Evidence is not wanting to prove that even rabies canina has been produced by the bite of an enraged dog which was in all respects healthy; sudden change of color of the hair by emotions of fear, and many other instances of a similar nature which it is not necessary to mention. Accepting these physiological truths, we can readily conceive how certain morbid impressions made upon the sentient extremities of the afferent nerves, and transmitted to the ganglionic centers, may influence the function of an organ so richly supplied with nerves and so important as the liver; one so intimately concerned with the supreme office of elaborating and metamorphosing the nutritive material introduced in the system, and adapting it to the separate offices and functions for which it is destined. We all know that the metabolic activity of the hepatic cells in the production of bile, is in direct proportion to the plus or minus degree of blood pressure. Any agent, therefore, disturbing for a given period of time the normal physiological equilibrium of blood pressure in this organ, directly and consequentially affects the secretion of bile. This fact has been repeatedly demonstrated by experiments made upon animals, showing, for example, that a section of the splanchnic nerves causes immediate dilation of the hepatic and other abdominal veins, followed by a diminution of arterial blood pressure and an increased flow of blood into the portal vein. The normal blood pressure, and consequently the normal flow of blood through the liver, is in a great measure dependent upon the active tonicity of the arteries imparted to them by the vaso-motor fillaments furnished to them from the sympathetic system. It may readily be conceived, therefore, how completely the generation of bile is regulated through the direct influence of this mysterious nerve, and how easily those causes which disturb its integrity, aberrating the normality of its office, may result in derangements of hepatic circulation, followed by hyperæmia and inflammation of the liver. Among those causes, as I have already indicated, I am disposed to regard heat as playing an important part.

We are told that the French troops stationed in Pavia during the Italian wars were affected with an epidemic of jaundice, which commenced in August and terminated in October; that the heat was un-

usually intense, and that the livers and spleens of all those who died were found enlarged and congested. Kircksig, describing the epidemic of jaundice in Suden Scheid in 1794, says that it raged from the end of August to the end of November; that the months of June, July and first half of August were characterized by prolonged heat, and dryness, followed by a sudden change of temperature and fall of the thermometer about the middle of August—the appearance of the epidemic commencing co-incidently with this decline of temperature. Innumerable instances of a similar nature, showing the direct connection of protracted heat with the existence of jaundice, might be cited, accomplishing such results no doubt by certain reflex actions transmitted from the sensitive surfaces through the cerebro-spinal and sympathetic systems to the involuntary muscles and secreting organs. The hepatic congestion and cholæmia found to exist in women during the catamenial presence, disappearing and returning cotemporaneously with the menstrual flow, furnishes another illustration of the effects upon the liver of reflex nervous excitation originating in the nerves of distant parts. Assuming then that the molecular processes going on in the protoplasm of the hepatic cells, necessary to the formation of bile pigment or the transformation of hæmoglobin into bilirubin, can be morbidly influenced by a disturbed condition of other organs through nervous connections, and that external causes—such as heat and cold—are capable of exerting such a power through the nerves of the integument, we are met by the question, in what manner does the deleterious agent of heat operate upon those nerves which control the function of the liver, to effect such derangement of its normal office?

Scientific research and experimentation have not yet supplied us with positive data upon which we can base a conclusive reply to this question. We can only fall back on the statements already made, and resting upon repeated experiments which demonstrate the effects upon the vascularity of the abdominal organs, including the liver, resulting from a division or a lesion of certain branches of the sympathetic nerve and by a legitimate method of logical deduction assert our belief in the theory that those branches of the sympathetic supplying the vessels of the liver, and influencing directly and potentially its office of secreting bile, when subjected to the protracted excitation and subsequent exhaustion of protecting the animal economy from the deleterious effects of prolonged heat, become partially paralyzed and are no longer capable of preserving through vaso-motor influence the normal arterial tonicity of the hepatic vessels; that this paresis of the arterial coats necessarily diminishes blood pressure and correspondingly increases venous congestion with a diffusion of bile into the circulation, and a consequent condition of jaundice; that such a result may not immediately follow the exposure to heat, but does in many instances develop itself by gradual morphotic changes going on and manifested at some subsequent period.

AMPUTATION BELOW THE KNEE-JOINT IN PREFERENCE TO BRISMENT FORCE IN CERTAIN CASES OF DEFORMITY WITH ANCHYLOSIS. ILLUSTRATED BY TWO CASES.

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[Read in the Section on Surgery and Anatomy, June, 1883.]

GENTLEMEN:

In all chronic inflammations of the knee-joint, such as strumous synovitis, white swelling, fungus articuli, etc., there is a reflex muscular contraction, which, unless prevented or overcome by persistent extension and counter-extension during the progress of the disease, will result in more or less serious deformity, generally a partial or incomplete sub-luxation backward with outward rotation, in which position it may be anchylosed by fibrous adhesions, false anchylosis, or by bony fusion, true anchylosis.

In all cases where the disease has entirely subsided, leaving this deformity, if it is possible to separate the patella from its adhesions with the femur, and if there is any movement whatever between the tibia and the femur, it is easier to resort to brisment forcé, even if it be necessary to make subcutaneous resection of the hamstring tendons in order that the leg may be brought into proper position. This operation, followed by the proper after-treatment, frequently results in a useful limb, and not infrequently with a movable joint.

But in cases where the patella is absolutely immovable and the tibia and femur are united by long fusion, it becomes necessary to make a V section through the angle of deformity as suggested by the late Dr. Gordon Buck, of New York, straighten the limb and secure it in that position by anchylosis. In all cases where the limb is of sufficient length to make it useful for locomotion without too great shortening, this is the preferable treatment as it results in a very useful member.

In those cases where the disease of the joint has occurred at a very early period of life, and has resulted in this deformity, the limb below the knee grows much less rapidly than the other. Patients are frequently brought to you in early adult life with the limb very much shorter than its fellow, and by the time they reach maturity the difference in the length of the limbs would make so serious a deformity that an artificial limb would be preferable to the natural one in its shortened condition. In all such cases, amputation below the knee-joint in the manner which I here intend to propose, and which is a modification of Prof. Stephen Smith's amputation at the knee-joint is preferable to resection of the bone, and attended with very much less danger to the patient.

The amputation should be performed by passing the knife from the tubercle of the tibia slightly downward and backward to the popliteal space, making a very slightly curved flap; then passing the knife from the same point on the tibia around the other side of the leg to the popliteal space with a similar curve, meeting your first incision at that point.

These flaps are then dissected up from a half an inch to an inch on either side, according to size of the limb ; a free incision is then made throngh the legamentum patellæ at its insertion into the tubercle of the tibia and the remaining soft tissues down to the bone. Then separate the tibia just below its articular facets either by a strong cartilage knife, or if the bony fusion is complete it is preferable to use the saw, in this way the joint is not exposed, and if the Esmarch bandage be used the operation is comparatively bloodless.

The popliteal artery being now secured, the thigh is flexed at a right angle with the trunk ; the wound is then stitched in the posterior part, making a linear incision entirely posterior to the end of the stump, a drainage tube having been inserted making its exit at the posterior portion of the wound at the upper part of the thigh.

If this operation be performed with antiseptic precautions, union, by first intention, can as a rule be secured, and no constitutional disturbance results, and when the wound is healed, the end of the stump, being free from cicatricial tissue, is never subject to irritation by pressure from an artificial limb.

The advantages of this operation are :

1. Much less dangerous than resection of the bone, resulting in much more speedy cure.

2. Resection always results in anchylosis, which prevents flexion of the limb in the sitting posture, which is a very serious inconvenience to the patient, while an artificial limb can be so applied as to be flexed when sitting, and is equally serviceable in locomotion.

3. If the natural limb is so much shortened as to require elongation by an artificial foot, or a very high shoe, the support is very insecure in walking, while the deformity is much more conspicuous than an artificial limb.

4. The advantage of this amputation over those ordinarily used is that the end of the stump is able to bear the weight of the patient without danger of irritation, the cicatrix being entirely behind the limb, and therefore not subjected to any pressure.

Eva L. J., aged 16 ; father healthy, mother always delicate, as has been this child ; seven other children all healthy. When patient was 18 months old an abscess formed at the top of the left knee, which opened at the lower part of the joint. No cause was known for this. The inflammation of the joint continued until she was between 5 and 6 years old, when the leg began to be flexed upon the thigh. One night the limb became flexed at nearly a right angle, in which position it has since remained. There was considerable tenderness of the joint, which was treated by liniments, frictions, etc. No extension was ever used. The patient at present is in fair health. Left limb flexed at nearly a right angle as seen in drawing, Fig. 1, subluxated backward and everted, firmly anchylosed by fusion of the femur, tibia, and patella. The leg below the knee is more than 3 inches shorter than its fellow. For this reason amputation below the knee was decided upon, as a V section through the angle of deformity would result in so great a shortening as to render the limb useless for locomotion without an elongated shoe, and, being at the same time anchylosed, would not have the advantage of flexion, which an artificial limb would give.

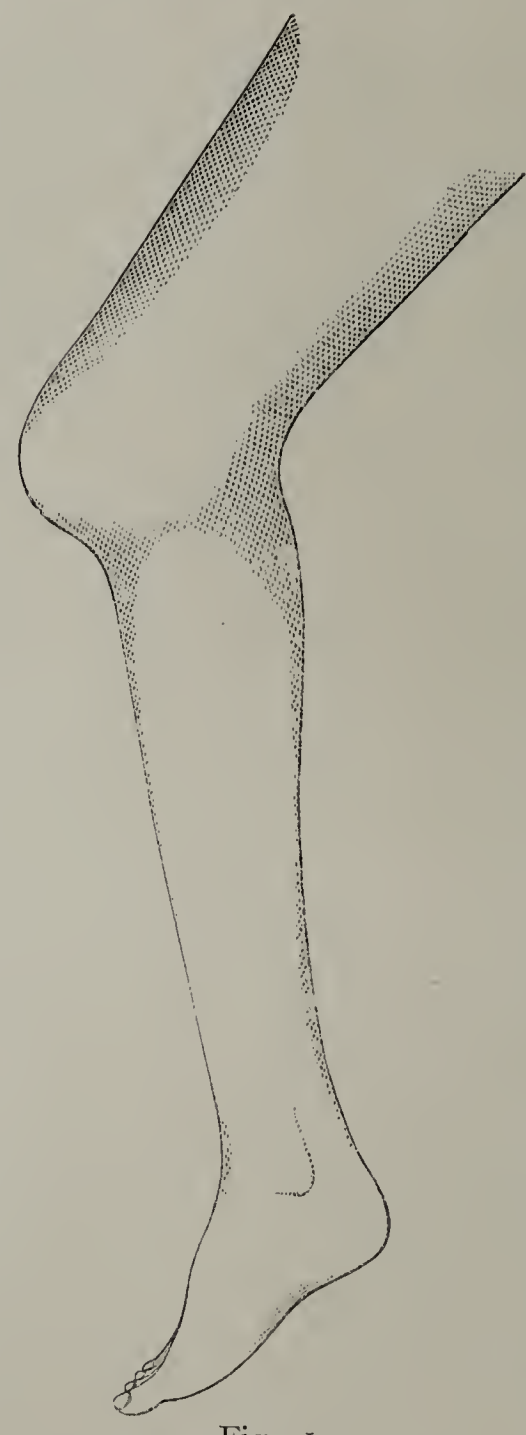


Fig. 1.

The modification of Smith's amputation was therefore performed by Dr. Lewis A. Sayre on April 7, 1883, with antiseptic precautions. There were no untoward symptoms, the ligatures coming away on the eleventh day, and the wound being completely closed on the seventeenth day after the operation, so that an artificial limb was applied six weeks from day of operation on which she walked without pain or discomfort. The accompanying photographs, taken one week after the application of the limb, show the condition of the stump and the position of the cicatrix entirely posterior to its end, as well as the ability to stand upon the limb, also that of flexion at the knee while sitting.



Fig. 2.



Fig. 3.

E. G., aged 11, of healthy parents, and always perfectly healthy. When 4 years of age, mother noticed swelling of right knee. This was pronounced white-swelling by the physician, who treated it by blisters and fixation in a box-splint, no extension being used. The limb was retained in the splint for four months, when it was removed, and the knee found to be anchylosed in the straight position. This anchylosis was fibrous in its character, as during the next four or five years the knee became more and more flexed, until it is now fixed at a right angle, with displacement of the tibia backward.

There is slight motion between the tibia and femur, but the patella is firmly fixed. An attempt at brisment forcé was made on April 25, 1883, but it was found impossible to release the patella from its fastenings to the femur, and the operation was therefore abandoned. No trouble followed the attempt at brisment forcé. The limb has been kept immovable after the operation, with pressure on the femoral artery, and cold applications to the joint, and on May 23, 1883, I amputated the limb below the knee-joint in the manner described, separating the tibia at the cartilaginous junction.

A small abscess was discovered in the head of the tibia, just beneath the cartilage. This was thoroughly scraped, and the wound washed with carbolized water. A ligature was placed upon the popliteal artery, a drainage tube inserted, and the wound closed with five stitches and adhesive-plaster strips between them. The operation was performed antiseptically. No trouble has followed, the temperature and pulse having not risen above 100, and very slight pain having been experienced.

Forty-eight hours after the operation the limb was dressed under the spray. No pus found. The adhesive straps were left in situ, but the sutures carefully removed without disturbing the wound, which seemed to be united except at the point of exit of the drainage tube and ligature, when the limb was re-dressed as before.

PÆDIATRIC MEDICINE AND ITS RELATION TO GENERAL MEDICINE.

BY J. B. CASEBEER, M.D., AUBURN, IND.

[Read in the Section on Diseases of Children, June, 1883.]

Many of our most successful practitioners of medicine amongst the *adult* population have made signal failures when called upon to exhibit their skill in the treatment of tender children.

We have often been pained by the remarks dropped from the lips of some physicians whom we were endeavoring to regard as sample practitioners, on account of the indifference manifested, and the slight degree of importance attached to their practice among the children, such as, "Well, you may give a few drops of 'paregoric,' or some 'catnip tea,' or most anything of that kind you may find convenient, as we cannot do much for children so young;" or, "Your mothers or 'old women' can treat young children as well as I or any physician can;" or, "I don't like to treat children, it is so unsatisfactory. They cannot tell how they feel and what is the matter with them, and I never can tell what they need."

To my mind, such remarks (and these are but a few imperfect specimens of those somewhat current in our ranks) indicate a lack of knowledge, or a misconception of the true principles of the practice of medicine as applied to the children, which certainly challenges our sincere attention.

It is a loud cry for *reform* or *re-education*. To my mind, the diseases of children speak as plain a langnage, and require as direct remedies to control them, and as emphatic in their demands as are those of the adult; and when we admit that untutored women or good nurses can judge of the requirements of sick children, and can treat them as well as the educated physician, then I feel that we ought to be honest enough to admit that the same is true in all classes of the sick. To my mind, paregoric, rhubarb, and chamomile are appropriate remedies, when indicated, alike to the child and the adult, and when not indicated would be as much out of place in the one as the other.

The natural language of the child is the true and untarnished expression of facts; while that of the adult, tainted by the prejudice of their own opinions, freighted with the imperfect use of an imperfect language to express their imperfect thoughts, must be taken with a great deal of allowance, and very much of it must be often entirely excluded when making up a diagnosis.

If the intelligent physician will but open his eyes and his ears, his little patient will unconsciously tell him how he feels and what is the deviation from the health standard. If he will but study cause and effect, he will find the indications for treatment just as plainly marked out as in his older patient, that may be very fluent in reciting his pains and aches. The physician practicing rational medicine, and who is governed in his treatment by the indications of each individual case, and strives to meet only the indications that do exist, needs to be versed in the laws and natural language of disease, the laws and standard of health, the true nature and effect of the reme-

dies used, both physiological and toxic; and if he can read these correctly and apply them with judgment, it matters not whether he finds his patient in Maine, Georgia, Pennsylvania, Ohio, Indiana, or California, the same symptoms call for the same remedies, and in the different ages of the patients the same language is to be read, the same indications to be met in the same way; and thus the same skill and judgment is called for, and the man who is really a good physician, and applies the same good common sense in his practice, can do so in one State or age as well as another.

While we believe the above is true, we believe also that the converse is only partially true; for we may, in our treatment of the vigorous adult, fail to skillfully meet the leading indications with their appropriate remedies, yet if we are not too excessive in the use of our misused remedies, our patient, with his strong vitality, may get well in spite of us, but in the tender age of our infantile patient a misplaced remedy might be fatal it its consequences.

We are therefore forced to the conclusion that the diseased children ought to be placed in the care of the *best physicians*, and, if the uneducated women and nurses are to be given work because of their kindness of heart and their good nursing, or even for their experimental knowledge, certainly let it be given them in the realm of the adults, where a neglect or a misapplied remedy is far less harmful.

Let no true physician flatter himself with the thought, much less say, I can do my whole duty to my adult patient, but I cannot successfully treat the children, for it is only the siren song of a false and overgrown conception of *self*.

In our curriculum of studies and in our libraries we have works on the "Practice of Medicine," which means the practice among the adults, and then we have books on the diseases of children and their treatment, written usually by different authors, and they describe diseases so differently and have such different views and modes of treatment, that the student at once infers that it is an entirely different study, and as it requires a different chair in the college (unless connected with the chair of gynæcology or obstetrics), he concludes certainly there is no similarity to general practice, and he enters it as a different study, views it from a different standpoint, and thus is prejudiced from the beginning, and is freighted with false impressions which complicates his labors, retards his progress, and he may feel that to be an *adept* in the one he must be a *failure in the other*.

Let us reason together a few minutes and see if we as a profession are not somewhat at fault in our teaching, or rather in our failing to teach the true similarity of the diseases of all classes, and thus mystify what should be made plain especially to the uniniated but anxious and earnest student.

Take for example pneumonitis in the child and in the adult. The same cause, as sudden change of temperature, under similar conditions of perspiration from prostration or over-exercise, with the inhalation of cold air, may in the child as in the adult produce a congestion of the lungs, and may result in bronchitis or pneumonitis.

In either case there is local hyperæmia; a chill, followed with febrile excitement, more or less intense, and if the sensitive pleura is involved there will be pain in proportion to the degree, and alike in both.

The indications are certainly alike in both—viz., to control the pain, allay the fever, and overcome local congestion.

We meet the first with our opiates, or, perhaps better, with aconite and bryonia, especially if the pain is made more severe by breathing or coughing or any movements, with a tendency to sweat, or if the pain is sharp or lancinating with hot dry skin, asclepias then will be a more appropriate remedy. To meet the second indication, if we have a full bounding pulse, our remedy is veratrum viride; but if it is small, quick, and thread-like we prefer aconite; or if the pulse is sharp, patient restless with sudden startings in sleep; and in the child you will get the shrill cry, and especially if there is elevated papillæ of the tongue, we then use the rhus toxicodendrum. If the secretion of the mucous membranes, and especially of the bronchial tubes, is not sufficient we use ipecac, and if too profuse and much rattling of mucous in the tubes, lobelia is added to the sedative; and experience declares that we can always correct these special symptoms with these special or direct remedies—always if we properly apply them.

The third indication may be met by local applications, as counter-irritation, thus bringing some of the surplus blood to the surface, or by the application of sufficient heat to cause the contraction of the over-distended blood-vessels, and thus enabling them to unload by forwarding the over-supply of blood, assisted by some capillary contractor such as ergot, calabar bean, or better still, in my opinion, by the use of proper doses of belladonna. These remedies are alike appropriate at all ages (except opium, which is seldom admissible in the child, and, I think, of doubtful influence in the adult generally).

Observing the above rules in the early stages of the varied forms of pleuritis and pneumonitis, they can be successfully aborted in a majority of cases.

Yes, I will say more. If it will abort one, it will abort another and another, if under similar circumstances, and if the same symptoms exist and are met by the same skillful application of the same remedies, and are applied in the proper strength and quantity, and at the proper time. This will hold true, no matter what is the patient's name, in what State he lives, or of what age. The real skill in the treatment of any patient is in the reading the exact language of disease by the existing indications, and thus to meet them with exactly the right remedy, given in just the right doses, and the latter often requires greater skill than either of the others. Here, then, good judgment is usually the ranking officer, and should take the command.

Or take, if you please, any of the other numerous inflammations, or any of the diseases which attack all ages of the human family, and the symptoms will be manifestly the same; and as similar indications are met with similar remedies under similar circum-

stances, we are forcibly impressed with the similarity of treatment which is indicated in all ages.

We do not inquire the age of our patient for the purpose of deciding what to give, so much as to decide how much to give.

Indigestions in all ages must alike be met with the same skill in regulating the quantity and quality of appropriate food, with the aid of such digestors as will aid the truant stomach to do its whole duty.

In surgery, dislocations are to be simililarly diagnosed and reduced; fractures also must be similarly placed in apposition and held with their appropriate dressings.

The infectious and contagious diseases are similarly manifested in the different ages of life, and I think no one would argue that the same rules of prevention and treatment should not prevail.

Of course, we must bear in mind that the nerve centers are more easily influenced, as they are less mature, in the child than in the adult, either for good or evil, by disease or medicines, but this will not so much guide us in selecting our remedy, as it will in the manner and power of its application.

I believe, when we entirely rid ourselves, as a profession, from that old and justly condemned habit of treating diseases instead of the patient, and let the pathological symptoms alone suggest the remedy used, then will we have come to the proper mark, and thus have lopped off a large section of worse than useless treatment; for in the tender age of childhood we cannot afford to use any unnecessary medicines, lest they prove detrimental to the best interest of our patient.

One step in the right direction is not sufficient when more is required (as it certainly is in pædratic medicine), for when we succeed in throwing overboard all unnecessary and uncalled for medication, then it is of the utmost importance that what remains to be administered should receive our careful attention, and should not only be in the purest possible condition, but be made as pleasant and acceptable to our patient as is possible.

I am free to admit that I have taxed my skill quite severely and for a long time endeavoring to make medicines pleasant. I have thererore studied to season skilfully, as the good cook would do, by using syrups—peppermint, cinnamon, wintergreen, licorice, ginger-brandy, whiskey, wine, etc. etc.; but could succeed better in pleasing the smell than the taste, and could take solid comfort in the old saying that I would hear repeated to my patient for his especial cheer and comfort, viz: "If the medicine don't taste bad and make you sick, it will do you no good."

I assure you I was greatly encouraged when I had the opportunity to make a reputation by furnishing nauseating and disgusting medicines to the sick, for I had then learned that a little medicine mixed with syrup, and flavored with one of the essential oils, would answer the purpose admirably, and in that I felt quite proficient. All went well until the homœopaths began to invade my territory, and soon my old patrons would say to me, "Doctor, I was sorry I could not have called you when my children were sick; but they had heard that Dr. —— gave such pleasant medicine, and would hear to nothing else than to have him called; yes, and they took his medicine so nicely, and got along very well."

It was not very long until I, with my fellow-practitioners who had "subdued the forest" and tamed the wilderness, learned that the grown-up children, and even the old folks, began to relish a better medicine, and would prefer to take a pleasant potion every 20 or 30 minutes, rather than a dose of old genuine medicine, not pleasant to the taste, every two or three, or even four hours. But I cannot stop here to give you in detail the anxious hours, the earnest study, and the full reasons for the steps taken and the success attained, in finding a way to prepare medicines that was not disgusting, but rather agreeable to the tastes and stomachs of our patients.

Suffice it to say that with us the battle is over; "medicine" is triumphant, and the homœopaths have departed for healthier climes, where physicians continue to disregard the stomachs of their patients, and continue to give disgusting potions. We now ask our druggist for pure, fresh medicines, free from the worthless gums and dirty sediments (and we get them); and then we can dispense them in pure water, God's only beverage to the thirsty, so that a spoonful will contain the desired dose of medicine, and this is rather grateful than otherwise to our patients, whether they be large or small. If we desire a condiment, we can use the distilled glycerine, and possibly, when it will do no harm and is desirable for the taste, a little of the purest white sugar can be used, or some desirable mint water may sometimes be preferred, and thus medical men can sustain amicable relations with the community, and even with the children. Their little stomachs are not so bloated with fermenting syrups, and the consequent colics are not so exciting our nurses into a constant demand for worm medicines, castor-oil and turpentine, etc.; but our little patients can have their rest, and even the physician is permitted to enjoy his repose until morning.

And now, in conclusion, let me ask my fellow-laborers in our beloved profession, in the interest of our own honor and usefulness; in the interest of the dear children we are called to administer unto, and in the interest of the anxious and earnest students seeking to know the geography of the whole field of medicine—I say in the interest of all these, let us endeavor to appreciate and teach the true relation existing between the child and the adult; the sprout and the full-grown tree, and forever divorce this branch of our practice from the unnatural relation heretofore forcibly maintained between it and gynæcology and obstetrics. And let us wake up to the realization of the fact that there is more real science in the proper practice of medicine among the children, where we read the nature, expression and influence of disease by the physical signs and rational symptoms, unaided by the verbal language of our patient; and also, that the treatment of children calls for the best efforts of the most scientific and skillful of our ranks, and that any indifference to or inclination to shift responsibility of their treatment, is only an evidence of our

weakness in this direction, and our non-appreciation of and unwillingness to perform our whole duty.

DISCUSSION.

Dr. Sennott, of Ohio, said he was interested in the treatment of diseases of children, on account of the action of medicines being untrammeled by mental predispositions.

Dr. Ulrich said children were shamefully abused by over-feeding and under-clothing, and ignorance regarding temperature, etc. He would hail with joy a revolution in the dress of the newly born; make the new dress of woolen material, loose, easily applied, etc.; would banish overlong skirts, pins, and belly bands. The dress now used for infants in this country was a torture, and the sooner a common-sense dress was adopted the better for future generations.

Dr. Boothby, of Wisconsin, agreed with Dr. Ulrich in the matter of dress, but would go further back in urging a revolution, back to the first bath, before any dress was used except a blanket. He would not allow a child to be bathed till from six to twelve hours had elapsed from its birth; would have the child thoroughly oiled, wrapped in soft, warm flannel, and laid by the side of the mother, and would not have mother or child disturbed for from a quarter to a half day; had seen fatal results from carelessness in bathing a weak babe in a cool room, and wrapping in cotton cloth; was particular to see that the babe was wrapped in flannel previously *warmed und dried*, and if because of circumstances it cannot be laid with the mother, keep near a warm stove.

Dr. Casebeer said, in closing the discussion, that what the profession needed in the medication of children, was pure and reliable medicine, given in water when possible, well diluted, small doses often repeated being generally preferable, and where this was followed by good judgment in other minutiæ, the regular physician would be preferred and employed many times where now the Homœopath is called.

UNITY OF DIPHTHERITIC AND MEMBRANOUS CROUP.

BY ALEX. HARRIS, M.D., VIRGINIA.

[Read before the Section on Diseases of Children, June, 1883.]

Because of the diverse views held by the profession at large, and especially the members of the district society which I have the honor to represent in part in this Association, I feel great interest in the discussion of the question, are Diphtheritic and Membranous Croup—the "Cynauche Trachialis of Cullen," the "True Croup" of other nosologists—convertible terms, modified only by difference in local expression, or are they distinct diseases, requiring opposite modes of treatment?

In the hope, then, of eliciting a discussion of this subject, which may at least secure a uniform therapy, I will assume the affirmative. Ours does not claim to be an exact, but a progressive science. At one time vensection was regarded the "sheet anchor" in the treatment of Asiatic cholera. Some of us have cured pneumonia—the cases amenable to the *vis medicinæ* of that day—by "blood-letting to deliquium animi," tart-ant in one-half grain doses, ptyalism, and the absolute diet; and, if I mistake not, the estimated mortality under that treatment was one in three. Think of the host of victims to apoplexy which large bleedings and active catharsis did not cure! Some of us remember the frequent blood-lettings, the close room and light diet treatment of phthisis pulmonalis, and the "galloping consumption" of that day. I need but mention them, the vastly reduced mortality in all these diseases secured by an opposite therapy, to illustrate the advance made in therapeutics, May it not be claimed that the facilities for, and certainty of, diagnosis have advanced *pari passu?* How many of us remember when cough, quick pulse, with emaciation were the diagnostics of phthisis pulmonalis; the "stitch in the side," pleurisy; brick dust expectoration, pneumonia, etc. Lately we depended upon general symptoms and physical signs to diagnose membranous laryngitis. Now we have the laryngoscope and microscope.

With this introduction I proceed to the consideration of the history of Membranous or Diptheritic Croup.

Diptheritic croup dates back certainly to the time of Areteus, if not, to that of Hippocrates.

The former of these writers, after describing pharyngeal diphtheria (as quoted by Dr. McKenzie), says: "If it extends rapidly to the chest through the windpipe, the patient dies the same day of suffocation." Galen refers to the expectoration of a "membranous tunic from the pharynx." But according to Dr. McKenzie, Baillou, who lived in the latter half of the sixteenth century, gives the first definite description of false membrane. Tilla Real, a Spanish physician, describes an epidemic which prevailed in 1611, in which you have "a white matter in the fauces, gullet and throat, of such a nature that if you stretch it with your hands it appears elastic, and has properties like those of wet leather."

Dr. House, of Edinburg, in 1765 described, under the name of *croup*, "an acute affection of the larynx and trachea, attended by the formation of a *membrane in the pharynx*, and often causing death by suffocation." Most of us, I presume, recognize diphtheria in this assemblage of symptoms.

In 1802 Dr. Cullen, of the same city, gave a description of *cynanchi trachealis*, in which we cannot fail to recognize the diphtheria of to-day; and Dr. Caldwell remarks, in a foot note, "that *croup* sometimes prevails epidemically, as appears to have been the case in the neighborhood of Alexandria, Va., in 1799, when Gen. Washington fell a victim to it."

Pathologically, I think it may be assumed that *false membrane* is as constant a result of diphtheritic inflammation or poisoning, as the eruption in scarlatina, or pustule in small-pox is an effect of the poison upon which those diseases depend; and if this membrane is found in the *pharynx*, I think I am safe in saying that we all consider it equally conclusive as a diagnostic. It appears, then, only necessary to establish the identity of *laryngeal* with *pharyngeal* false membrane, to make the former as conclusive a diagnostic as the latter.

I presume no one will undertake to differentiate *laryngeal* from *pharyngeal* false membrane by the "naked eye" appearances. Virchow at one time based a distinction upon the claim that diphtheritic membrane could not be detached without tearing the underlying surface, while the croupous could be removed without injury. He, however, surrendered this distinction after closer observation.

Dr. McKenzie holds that it has been fully demonstrated that the difference in *degree* of adhesion of pharyngeal and laryngeal false membrane, is due to the difference in the structure of the parts upon which they exude.

So far as I am informed, microscopists have failed to differentiate. Dr. Wagner declares that his preparations of *croupous* and diphtheritic membrane "are very much alike." Rindfleisch admits that "the pathological processes are the same."

We now come to consider the supposed clinical difference and post mortem revelations.

Dr. Watson (see lectures as to membranous croup) says: "It is not contagious, but is sometimes found attacking more than one member of the same family at the same time, or in quick succession. The children of washerwomen are more particularly obnoxious to it, and the attack is sometimes *preceded by sore throat*" (an incident has recently occurred under my own observation, in which diphtheria was conveyed in the clothes to be washed to the family of the laundress).

Dr. Colsy, in his account of *membranous croup*, says: "It appears to be epidemic when the wind is from the east"; and in his descriptions of post mortem revelations says: "The mucous membrane of the *pharynx* is sometimes *covered* with false membrane, at the same time that we find it in the larynx."

Dr. Wood (see Practice, Vol. I., p. 813, article *Pseudo-Membranous Croup*) says, in his account of symptoms: "This disease may always be suspected when the voice cannot be raised above a whisper, with wheezing inspirations, and especially when examination reveals *patches* upon the fauces, *or a continuous coating of fibrinous exudation on the soft palate, half arches, or pharynx.*"

Troupian, in his lecture, "Diphtheria," says: "Diphtheria shows a marked preference for the pharynx, the air passages, and of them, particularly the larynx, constituting the affections commonly known as membranous sore throat, or malignant sore throat, formerly designated gangrenous sore throat, and suffocative sore throat, now more particularly called *croup*, in which the larynx is the chief seat of the disease. Of all its forms, pharyngeal is by far the most common."

Then follows the history of a case of croup occurring in the Hotel Dieu, under the following circumstances: Six days after the admission of a mother and her child into a ward, where there was a woman with membranous sore throat and a child with croup, the mother was found to have the right tonsil and uvula coated with false membrane and the cervical glands enlarged. Her child was attacked three days later. A whitish concretion was observed on a slightly abraded surface at one of the commissures of the lips; the tonsils, as well as pillars and arch of the palate, presented nothing abnormal, *not even redness.* On the third day symptoms of croup presented themselves; by the fifth this child was dead from suffocation. The autopsy revealed an absence of any deposit upon the tonsils or palate, but the larynx and trachea were invaded by false membrane, which extended even to the most distant bronchial ramifications.

It is claimed by dualists that diphtheria has its local expression in the pharynx, occasionally spreading to the larynx, while croup is especially a disease of the larynx and trachea.

I have good authority for the statement that membranous croup originates in the larynx or trachea in about ten or twelve per cent. of cases, but if it had its origin in one of these localities in *every case*, unity could still be successfully maintained. In a constitutional disease *local expression* cannot make a specific difference.

Rheumatism, whether expressed in muscle or joint, is rheumatism still. Cancer is no less cancer with its local expression in the larynx, than if the pharynx be the site selected. It is true, if this site be selected the cervical glands sympathize at once, because of the intimate anatomical relations of the parts, and this fact obtains also in pharyngeal diphtheria, and admits of the same explanation.

But dualists urge that croup is a sthenic and diptheria, an asthenic disease. In reply, while few of the profession now resort to the lancet in membranous croup, but on the contrary distinguished dualist authorities recommend the supporting plan in which alcohol is specially included, Dr. Simons, of Paris, reports fifty-three cases of diphtheria treated by venesection in 1878, without the loss of a case. All clinical experience attests a wide range in *type* of all the Zymoses, from collapse to the highest excitement. I believe laryngeal is generally more sthenic than pharyngeal diptheria, which fact has been ascribed to different anatomical relations of the local expression, but few authorities now regard membranous croup a sthenic disease.

To sum up, unity is established by the history. The old writers evidently describe diphtheria under the varied nomenclature of "croups, membranous croups, cynanche trachialis," etc. By the ætiology, none of us suppose that the children of London washerwomen were so prone to *croup* because of the dampness produced in their houses by washing, as Watson thought, but the contagion was brought in the clothing to be washed.

Pathologically, microscopically, and clinically, the membranous exudation has been shown to be the same, modified only by difference in site.

Clinically, for myself I will say, that if you will show me through the intervention of the laryngoscope false membranes in the larynx (eliminating Herpes and perhaps Minguett) or the expectorated membrane separated from the mucous by water, I will not hesitate to say that you have a case of blood-poisoniug, now known as diphtheria, although there were no deposits in the pharynx. I have recently treated and lost a case.

DISCUSSION ON DIPHTHERIA AND MEMBRANOUS CROUP.--ITS UNITY OR DUALITY.

BY E. L. BOOTHBY, M.D., HAMMOND, ST. CROIX CO., WIS.

The alleged or so-called differences between what is known as membranous croup and diphtheritis are—1st, pathological; 2d, clinical ones. There was great importance attached to the pathological structure of the false membranes found in the pharynx and larynx in the peculiar inflammations known as diphtheria and membranous croup.

Virchow was the originator of these so-called pathological differences, better called theoretical distinctions. He admitted a similarity in structure, but claimed that the exudation was poured into the structure into the substance of the mucous membrane in pharyngeal *diphtheria*, while in membranous croup the exudation was but a coagulation upon the surface.

A most important point was thought here to be made in practical diagnosis,—removing the membranes, etc., etc. No homogenous basement membrane in the pharynx, and is in the larynx. He surrendered this ground finally, for he found that these exudations passed into each other by insensible gradations, and then brought up another theory that necrosis of the subjacent tissue was the great pathological symptom, and distinguishing feature of diphtheritis.

This was no better than the other, for many cases he found to be croup clinically, but necrosis (*death*) of the soft tissues supervened, and *vice versa*.

No naked eye or microscopical differences in the two membranes.

Wagner says the diphtheritic deposit is a transparent, homogenous lustrous net-work filled with pus corpuscles croupous.

Deposit is a close net-work of delicate threads whose meshes contain elements resembling *puss cells*. Rindfleisch believes in a pathological identity of the two membranes. Hence, we must perforce abandon our first difference, viz.: the pathological.

Next let us consider what has been termed the clinical differences. They are as follows: 1st, the difference in location; 2d, the difference in manifestation.

In regard to the first named, that of site or location, it is claimed that diphtheria is a disease of the pharynx, tho' it may sometimes spread downward into the larynx. While croup, the dualists claim, is essentiaily an affection of the larynx, and never follows upward or appears in the pharynx. It would not be croup then, for that term croup or croups was just given to an acute affection of the passages in 1713, by Dr. Polk Blair, of Scotland, while the disease now known and described as diphtheria of the pharynx was not known to the profession of Great Britain till 1858 as d.phtheria.

That croup does often begin in the pharynx and passes downward into the larynx, exhibiting oftimes none of the peculiar symptoms of diphtheria, that is, no constitutional disturbances, such as is caused by sepsis, is a fact to which I can testify from many a bed-side experience. In fact, I am ready to assert, and to prove, from careful clinical investigation, that more than 75 per cent. of those cases which the adherents of the duality theory claim to be membranous croup and distinct from diphtheria, the primary local disturbance begins in the pharynx and passes downward into the larynx, and was discovered and pronounced membranous croup.

However, it is not only a matter of logic, but a matter of fact, that differences of location can not from any process of reasoning, from any logical reasoning, be considered in a *constitutional* disease a *specific difference*—(*cancer of larynx*).

The first of the clinical differences then is disposed of; then, that of site or location.

Secondly, let us look for a moment at the manifestations of the two (*so called*) diseases.

1. They claim for croup that *it* is local (*purely and simply*).

2. That there is no inflamed lymphatics, and consequently no sepsis from secondary absorption into the system of the poison locally generated.

3. That croup is a sthenic(?) disease.

4. No albumen appears in urine.

5. Paralysis never supervenes.

While, per contra, it is claimed by the same class of men that just the opposite is true of diphtheria, viz.:

1. That it *is* a *constitutional* disease.

2. It is of a dynamic type.

3. That the cervical lymphatics ARE swollen and inflamed.

4. That albuminaria often appears (and when it does so your patient generally dies).

And 5, and last. Paralysis is a common sequel. All of which, regarding pharyngeal diphtheria, we do not attempt to deny, only merely claiming the same conditions supervene in what the dualists call membranous croup.

Let us quietly and briefly examine these claims, and see whether these assertions are facts or fictions.

1st. The constitutional or local nature.

The primary septic condition gives rise to, first, the local conditions; and secondly (according to where these local conditions appear), and subsequently, generate poison to constitutional disturbances.

Though in malignant cases the primary symptoms are constitutional, for the primary septic cause was a powerful one, and may give rise to constitutional disturbances as well when first manifesting itself in the one place as in the other, remember the free net-work of absorbents of the mucous membrane of the nasal passages, the soft palate, and back of the pharynx, with their wonderful connection with the very numerous cervical glands beneath the angle of the jaw; and do not wonder that poison is carried through them into the system, deteriorating the blood, and causing great hyperæmia and swelling; and contrast this with the paucity of lymphatics in the larynx and trachea, which are connected with but the *one* solitary lymphatic gland, and one small one on the side of the trachea.

And do you not readily *see* WHY you do not get constitutional disturbances when the disease is located in the larynx or trachea?

There is *not* the liability, there can *not* be the danger, there is *not* the constitutional disturbances, when the disease has first seized upon the larynx or trachea.

2. We are told croup is sthenic(?), diphtheria, adynamic—opposite conditions.

Yet diphtheria is often treated with calomel and bleeding, and many advocate a stimulating treatment for croup.

Therefore, we must draw this fact—that distinctions based on a difference of type only in two diseases are without weight.

3. The inflamed and swollen glands I have already spoken of.

4. The alleged clinical difference was albumenaria. Did any of you ever test the urine in what you called membranous croup?

Then test it for albumen in the same number of cases in what you call two diseases, say 100 of each, and you will find it as often complicating the one as the other, and your patients will die in both cases, as a general thing.

5, last. Paralysis—common in diphtheria, rare in croup, I admit. Yet not a year ago I read of a case diagnosed membranous croup where the little patient, struggling in the greatest agony for a breath of God's life-giving oxygen, raised herself from the pillow, only to fall back the next moment a complete paraplegia, in which condition she remained till death ended her sufferings, some forty-eight hours subsequently.

Ordinarily, our patients are asphyxiated ere they have time for paralysis to appear, as *that* is generally a *sequel*.

There, gentlemen, are all the conditions which have ever been claimed, so far as I know, in the differential diagnosis of what you denominate membranous croup and diphtheritis.

We must look upon this question, however, from a broad, a philosophical, a progressive standpoint.

In order that we may place our accumumulated knowledge where we can use it to the greatest advantage, we must classify. At first, classifications were all symptomatic. Next, after anatomy became mastered, classifications were all anatomical.

But neither of these will answer for the present day. An ætiological classification is what we seek. Trace disease to its origin, unearth its hidden causes, for the cause of disease is the very essence of its specific nature.

INFANTILE PARALYSIS.

BY DR. NORMAN TEAL, KENDALLVILLE, IND.

[Read in the Section on Diseases of Children.]

The subject of infantile paralysis is chosen in this instance for two main reasons: First, for what is not known of it; and second, for what ought to be, and possibly in time may be, learned of a malady of so frequent occurrence and so dire in consequences.

The gospel preacher does best when discoursing from a substantial text, and so it is, I fancy, in regard to other speculative as well as practical subjects. Accordingly, for the better discussion of the subject in question, I will introduce a case in point, which will be recognized as a fair type of essential paralysis: A seventeen-month-old female child of previous good health and of good development was recently brought to me by the mother and the attending physician, presenting the following special symptoms:

Complete *paraplegia*, considerable *dyspnœa*, slight *paresis*, involving the muscles of the *neck*, *dorsum* and *arms*, with the attendant inability to hold up its head—that is, to hold the head erect without special effort, etc., and with a very slight restlessness apparent in the face and eyes. The history, as related by the mother, was that the child had passed a quiet and comfortable night in bed with its parents; that it had played in bed in the morning, as was usual with the lively little charge; that the child, after its morning romp in bed, had been allowed to climb out upon the floor, intending, or at least so interpreted by the mother, to run to the father, who had previously arisen, when suddenly the alarming fact that this usual morning feat of running about the house in robe scant and free could not be performed. The child could neither run, walk nor stand; it was thenceforth a helpless little bundle.

As before remarked, this is a typical case of infantile paralysis; and cases similar to this occur continually, and many have happened in the past. The malady has left its indelible stamp of distortion and disability upon its thousands of victims in the past, and is daily recruiting its army of cripples, in spite of boasted achievements in medical and surgical science. Though, the fact is, the profession is not boastful in regard to essential paralysis: on the contrary, there are too many of its members who shun the victims of this disease, because they feel so little can be done in the way of curing.

In regard to the treatment of the case I present, I have to say, pot. bromid., ergot ex. fl., and bel. ex. fl., were prescribed, followed by abatement of several prominent symptoms, notably the dyspnœa and the paresis of the neck and arms, but, as may be inferred, without any apparent change in the paraplægic condition. In addition to the internal medicines given in the case, external manipulation, such as rubbing with the hands, slapping the surface of the thighs and nates, galvanism, and often repeated moving of the feet and lower extremities, with particular attention to flexion and extension of the principal joints, and also of the feet and toes, was not only made by myself, but strongly advised, and, I have no doubt, was practiced by the attendants of the patient. Attention to diet and general bodily exercise was also included in the management of the case. This is the case, so far as history, treatment, and the partial results already mentioned are concerned. The present status, after the lapse of about four months, will follow, with your further attention: The patient has regained the power to move the toes, can sit erect and easily hold up the head, has no dyspnœa, can flex the legs and thighs, but has only feeble power of extension; cannot stand, or at best can only do so with aid, and has learned to creep about, dragging the enfeebled lower part of the body along. I may be per-

mitted to remark, at this juncture, that I regard this crawling or creeping operation as somewhat against the patient, for the reason that the bodily exercise thus made or taken is at the expense of the lower enfeebled parts, in the respect that such locomotion, while it satisfies the immediate desires of the patient for change of position, it does not in the least give the much-needed exercise to the affected parts; and, on the contrary, it induces a habit of allowing such parts to remain in a state of idleness, which, above all things, is hurtful to chronic cases of this class.

So far no reference has been made to the pathology of essential paralysis, and upon this rock in this case —as in all others of the class we founder, or, if we choose, may float out into the sea of speculation—a feat I, for one, do not now elect to perform.

In conclusion, gentlemen, I beg to suggest that in the present light we are especially called upon to guard our little unfortunates against the deformities almost sure to follow siezing of this disease.

While we do not know the true nature of infantile paralysis, we do know only too well that atrophy contractions, with adhesions, etc., are common results; and it is against these we must guard as best we can. The proper measures to fulfill this, or these indications, will suggest themselves to the attentive practitioner. Do not infer that I mean to say that even the best of our efforts will always succeed entirely in preventing deformities. I do say, however, that much may be done in this direction by well directed manipulation and appliances, to the exclusion of nostrums and all dyspepsia breeding. In short, gentlemen, the patient should be treated mechanically according to the indications in each particular case, flanked only by such internal medicines as may be required for the correction of unhealthy constitutional conditions.

With the best possible treatment our patients will generally remain paralyzed, at least for a long time, but I hold that if we keep up the nutrition of the affected parts, by any means whatever, and mechanically and otherwise guard against deformities, we assure to them—in fact, gain for them—about the only chance of final recovery. On the contrary, if we allow deformities to take place, our patient can scarcely recover, even if the paralysis should fortunately pass off.

Is there any question in the minds of my hearers as to the authoritative language of allowing or permitting deformities to occur? If so, I answer that the surgeon who would allow anchylosis of the wrist to follow a Colle's fracture—without having advised, yea, even enforced, early passive motion—would be guilty of malpractice, and would be equally guilty if he permitted his young paraplegic's lower extremities to become distorted without having made strenuous efforts to prevent such calamitous condition. These efforts should be massage, opposing abnormal contractions and tendencies thereto by hand and proper mechanical appliances, bathing, moderate friction of the limp extremities and the spine, standing the patient erect upon the supported limbs, and all means possible and probable that may send life-giving blood into the half-dead tissues, and such means as will certainly compel the enfeebled parts to action, for it is well known that non-use not only fosters but even begets inability.

Much more might be said in regard to the management of cases of infantile paralysis, but as this paper was and is intended only to be suggestive, and does not in the least particular aim to be conclusive, I will leave the subject, trusting that a little lesson has been set, from which practical results may evolve.

DISCUSSION.

Dr. Wm. Lee, of Baltimore, said that Dr. Teal's paper was confined to what he called paralysis, coming on suddenly without warning. He believed these cases, as a rule, had an exciting cause—such as rheumatism or neuralgia, and this from the fact that the patients usually got well in a short time under proper treatment for these exciting causes. Sometimes the disease simulates morbus coxarius, but this was easily excluded for want of other important symptoms. He believed the treatment of infantile paralysis often very unsuccessful, and, if successful, very tedious, even under the management of our ablest men.

JEQUIRITY IN GRANULAR LIDS.

BY EUGENE SMITH, M.D., PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY IN DETROIT MEDICAL COLLEGE.

During the past year the attention of oculists has been called to the treatment of this intractable disease by an infusion of jequirity seeds, and the profession is indebted to Dr. DeWecker, of Paris, for first bringing it forward in such manner as to make its use promising. Conflicting statements, however, have prevented many from using it, and no doubt the very severe effect of its application in many cases has prevented those testing it from giving it a fair trial.

During my vacation this summer I visited Dr. De Wecker's clinique, and there saw many cases in various stages of treatment, his method of applying it and the results, and I was somewhat astonished at each phaze of it.

As trachoma is the *bète noire* of our practice in Michigan, I am deeply interested in its effects, and I feel personally under many oblications to Dr. De Wecker. I believe the profession will also for bringing to our notice jequirity.

DeWecker gave me some of the seeds he was using, and instructed me in the manner of using them. Since my return I have used the treatment in twelve eyes, being able to bear him out in most of his statements, so far as such a limited number of cases will permit. Besides the seeds he gave me I have used seeds procured from Parke, Davis & Co., chemists, which produced the same effect.

In an article on this subject, DeWecker says in the *Annales d' Oculistique* for May and June, 1883:

1st. "Incontestably, lotions with the infusion of the seeds of jequirity cause a purulent ophthalmia of croupal character, the intensity of which can be regulated by the number of applications made and the strength of the solution used."

2d. "Incontestably, the cornea runs no risk during the course of jequiritic ophthalmia."

3d. "Incontestably, jequiritic ophthalmia cures granulation rapidly."

In support of DeWecker's conclusions, I can say that in *each* of the cases in which I have used it, I have found the jequiritic ophthalmia assert itself after the *first* application of a 3 per cent. solution of either a warm or cold infusion.[1] The degree of its activity varied in different cases, but it was active in all. Some individuals seemed more susceptible to its effects than others. In *each* case there was the phlegmonous-like swelling of the lids, with headache and fever, and in several of the cases *nausea* and *vomiting*. The croupal membrane formed on the conjunctiva, and there was a *sero-purulent* discharge instead of one distinctively purulent. The immediate effect of each application lasted several hours, and the applications were made *three times* a day for *three days*, nine applications in all. The effects were then allowed to subside, simply keeping the eyes clean by bathing the lids several times a day in cold water or borated water.

So much for his first proposition. The second proposition—"the cornea does not run any risk from its proper use"—would seem to be supported by the following facts:

On my return home, August 17th, I found in St. Mary's Hospital a Mr. C., aged 73, who had been for about 10 days under the care of my assistant for a large asthenic ulcer of the left cornea. About four-fifths of the cornea was affected and nearly necrosed, and in spite of the usual methods of treating such cases, it was proceeding to the bad very rapidly; in fact, I considered the eye lost. I was about to test jequirity in a case of trachoma which I had treated at various times for a year or more, when I thought the case of corneal ulcer was a good one to test the fact of its *danger to the cornea*. I made an application to the conjunctival sac and laid a sponge wet with the solution on the lids at noon, and ordered an application that evening and next morning. When I saw him at noon next day—just 24 hours after *first* dose—there was high fever, nausea, intense shining œdema of the lids, particularly the upper lid, chemosis, and considerable pain when the lids were touched. I stopped the use of the jequirity, and let the patient wash the lids with a solution of boracic acid (about 2 grains to the ounce), and let the jequiritic inflammation pass off. The progressive tendency of the ulcer seemed checked, and improvement continued. He was discharged September 4th about well. In another case I used it three times a day for three days in a case of ulcerated trachomatous pannus, with a *small prolapse of the iris*, and the ulcer disappeared with the pannus inside of 10 days from the time of the use of jequirity.

That corneal trouble may arise, however, and that care must be taken in its use, the following fact shows. A Mr. P., whom I have treated several times during the past year for trachoma, and who has been treated by others for the past three or four years, was placed under the jequirity treatment, a 3 per cent. solution being used. The lower half of the cornea had seemingly never been affected by the trachoma; the upper half had a thin pannus. As the jequiritic inflammation passed off, the lower half of cornea of right eye was seen to be extremely hazed, almost bordering on an abcess of the cornea in appearance, and looked as if desquamation might take place. It did not, however, and the cornea slowly cleared up. The left eye took the same peculiar course, only perhaps in a severer form, the keratatis being well marked, and was followed by a small but rather deep ulcer, which, without special treatment, has slowly got well, leaving a thin leucoma.

With regard to the third proposition, "It cures granulations rapidly": I have been astonished at the marked effects I have seen in three weeks as a result of three days' treatment. I have never seen equal results from three months' treatment of similar cases by any of the usual methods. I think, however, the best results will follow its use in those cases of diffuse thickening of the entire palpebral conjunctiva, without the isolated trachomatous bodies; those which seem to be a general lymph-like infiltration with trachomatous bodies in the ocular conjunctiva and possibly in the cornea. In my experience, thus far, these are the cases most benefited.

As to its application, I saw DeWecker use a small sponge, with which he made an application to the everted lids, and had the sponge, wet with the infusion, applied to the lids, externally, for five or ten minutes. These applications were made three times a day for three days (nine applications in all). After trying this method I substituted absorbent cotton for the sponge, and I think its use much pleasanter. I find, in order to get the desired effect, it is well (if the swelling of the lid does not prevent) to evert the lids at least the first three or four times of its application and with a bit of dry absorbent cotton wipe off gently the diphtheritic exudation before applying the lotion. Care must be taken that the sero-purulent discharge does not get into the unaffected eye, as it will set up a similar inflammation and greatly increase the patient's discomfort. Owing to the severity of its constitutional effect when applied to one eye, it is advisable to treat but one eye at a time. After the severe symptoms pass off, which will be in four or five days, the other eye may be treated. The tendency to posterior symblepharon should be combatted by separating the agglutination with a probe.

[1] This is the strength commonly used by DeWecker at present, though he sometimes uses a 5 per cent. solution, closely watching its effects.

MEDICAL PROGRESS.

NEW INVENTIONS.

Nussbaum's Bracelet for Writer's Cramp.—This is, in fact, a penholder, which Nussbaum calls a bracelet, to be guided by the extensors and abductors, instead of by the flexors and adductors. It consists of a band of vulcanite of oval shape, about an eighth of an inch thick, and one inch and a quarter broad, with an oval diameter of about three inches and a quarter, and a short one of an inch and a quar-

ter. All the five fingers of the hand can be slipped into it. In using it, however, the thumb only just enters; the little finger is left free outside, and the first, second and third fingers are passed in fully. The instrument can only be held firmly by expanding the fingers through, bringing into play the abductors of the thumb and the extensors of the first and fourth fingers. The pen is screwed to the bracelet so as to be in contact with the paper when the hand lies on a table. Professor Von Nussbaum has tried the treatment of the instrument in a large number of well marked cases of the disease, and states that all the patients wrote easily and well with it, and all of them said they felt comfortable and confident in employing it, writing without any fear of spasm being excited. —*Med. Times and Gazette, July* 21.

NEW REMEDIES.

ARBUTIN.—Prepared from the familiar bearberry leaves, the uvær usifolia of the pharmacopœias Meuche proved its diuretic effect in a case of mitral disease of the heart. It seemed to have a similar action in a case of chronic tubercular peritonitis. Catarrh of the urinary organs is the special province for the employment of arbutin. The urine of patients taking arbutin when first passed is of a normal color, but becomes of a dark-green color by standing, like the urine in carbolic acid poisoning. Bodländer has proved that hydrochinon is present in such urine. Arbutin is a glucosate, and occurs in fine acicular crystals of white color, soluble in water, which solution is of neutral reaction, of faint bitter taste, and odorless. The following formula illustrates the chemical composition of the substance, and also the reaction which takes place under the influence of a ferment:

$$\left.\begin{matrix} C_6 H_{11} O_5 \\ C_6 H_4 OH \end{matrix}\right\} Q + H_2 O = C_6 H_{12} O_6 + C_6 H_4 (OH)_2$$

Arbutin + Water = Glucose + Hydrochinum.

Hydrochinon will thus be seen to differ from phenal merely by the replacement of a second atom of hydrogen of the organic radical $C_6 H_6$ by an atom of monovalent hydroxyl. The remedy may be administered in large doses without the production of any unpleasant effects. Brieger has employed a solution of hydrochinon as an injection in the treatment of gonorrhœa, but the healing influence of the drug would seem to be quite as effectually exhibited by giving arbutin by the mouth. It is recommended to give forty-five to sixty grains of the powder in the course of twenty-four hours in cases of urethritis.—*Lancet.*

KORONIKO, from the veronica pariflora, is largely used in New Zealand as a remedy in dysentery and diarrhœa. Dr. Jardine has also found it of much value in the chronic dysentery of China. After the administration of fifteen doses of the tincture of koroniko the number of the sanguineous and slimy stools was reduced to one-half, other fifteen doses reduced them to three or four daily, and a third like quantity effected a complete cure.—*Lancet.*

THE WATER CRESS.—Dr. Grelletz, of Vichy, brought before the Therapeutical Society (Bulletin, June 30) the question whether this popular article of diet possesses any of the depurative qualities popularly attributed to it. He is of opinion that it does not, and that it is indigestible to most stomachs. It has acquired an undeserved reputation, and may be mischievous in the various forms of dyspepsia. Dr. Noel Guéneau de Mussy, however, is of opinion that this plant is possessed of real therapeutical powers, and he has, on many occasions, derived advantage from it in chronic cutaneous affections. He recommends its being prepared for the table in the same way as spinach, when it is easily digested and of a pleasant taste, or the cress may be carefully washed, cut up into small pieces, and then submitted to a press in order that its juice may be expressed. This is a little acrid, but may be corrected by syrup of bitter oranges or of horse-radish. Dr. Campardon has also found it of utility in dartrous affections, as Dr. C Paul has in several cases of diabetes.—*Med. Times and Gazette*, Aug. 4.

CLINICAL CHARACTERS OF WOOL-SORTERS' DISEASE (ANTHRAX).—Mr. Spear (*Medical Times and Gazette*, July 21) has prepared a memorandum on behalf of the British Local Government Board for use in an inquiry into the occurrence of this disease amongst men employed in hide warehouses, tanneries, etc.

The Internal Form of the Infection, or Anthrax Fever.—Premonitory symptoms (of variable duration): Chilliness, aching or stiffness of limbs, and mental depression; restlessness, sense of constriction of chest, and oppression of breathing; headache, dizziness, nausea, or, less frequently, vomiting.

Stage of full development: Notwithstanding the indefinite premonitory symptoms, the stage of full development is generally somewhat sudden and unexpected in its onset, so as to cause much alarm. The prostration and restlessness become extreme; there are præcordial anxiety and dyspnœa; blueness of the face and extremities (cyanosis) is conspicuous; and the patient may die within twenty-four or thirty-six hours, with all the appearances of collapse or of asphyxia. A fatal termination is, however, more often postponed until from two to five days after the commencement of this stage. Other nervous phenomena—muscular paralysis, convulsions or tetanic spasms—are apt to develop themselves, and evidences of various acute local congestions (especially of the lungs, less frequently of the gastro-intestinal tract) are rarely wanting. Delirium is often absent, and the temperature is irregular. Exacerbations, alternating with more or less complete remissions, of the more urgent symptoms constitute usually a striking feature of the disease. Recovery is not so rare as has been supposed, even in fully developed attacks; but death may occur from a relapse, or from secondary septic processes. The body after death usually undergoes rapid decomposition, with blue discoloration and swelling, especially about the neck.

The External Form of the Infection, or Malignant Pustule.—The malignant pustule attacks almost always parts of the body habitually uncovered, and most frequently the face. It commences as a small

papule, which quickly develops into a vesicle, and this, being broken, pours out a little watery exudation. The base of the vesicle and the surface immediately adjacent dies, so that in about three days after its appearance the lesion consists of a small central black eschar, with a raised border of inflamed and tumid skin, upon which vesicles are apt to be developed, a crop of secondary vesicles surrounding thus the central eschar like a wreath. The neighboring lymphatics and glands are speedily implicated, and the patient may soon lapse into the condition described above, of constitutional infection. The pustule does not apparently always present this typical appearance. When occurring upon the hands, such appearance is uncommon. It has then no central black eschar, no raised vesiculated border. It is described as a small slightly inflamed tumor, exuding only serosity, giving rise to comparatively little pain, or even increased sensibility, but showing a tendency to set up a diffuse cellulitis. Constitutional infection may follow.

Scarlet Fever in its Relation to the Puerperal State.—J. T. Burgess, L.R.C.P., L.R.C.S., Edin., in a communication to the *Lancet* August 25, records a case of scarlet fever occurring in a puerperal woman, delivered five days before the appearance of the disease, and resulting in tympanitis, dilirium and death thirteen days after delivery. She was confined in an isolated cottage, in a sparsely populated district, and in which, twelve months previously, searlet fever had prevailed. The house had never been disinfected, and in hurriedly preparing a room for the reception of the patient, a quantity of old sacking was removed from the chimney. While in attendance upon this case, and the day before her death, the recorder delivered another woman, seven miles distant, who, in turn, was taken with scarlet fever, showing soon after delivery symptoms of constitutional disturbance, and on the third day sore throat ; on the sixth day the rash appeared. She passed through the stage of desquamation, but suffered from pneumonia and abdominial tympanitis, and died on the twenty-third day from exhaustion. A younger sister, who had been in attendance on her, passed through a slight attack of scarlatina. There had been no scarlet fever in the village where the second case resided, nor, as far as could be ascertained, could she have had communication with any one suffering from that disease. The more important complications appeared to take the form of serious inflammation, and to be exaggerations of the after-consequences rather than of the primary symptoms of disease.

The Action of Saline Cathartics—Dr. Matthew Hay has recently conducted a series of experiments upon animals, to properly define this subject, in the pharmalogical laboratory of the University of Edinburgh, the result of which he has published in the *Journal of Anatomy and Physiology*. The following embody some of the conclusions at which he arrived :

The excito-secretory action of a saline purgative is probably due to the bitterness as well as to the irritant and specific properties of the salt, and not to osmosis.

The low diffusibility of the salt impedes the absorption of the secreted fluid.

Between stimulated secretion on the one hand, and impeded absorption on the other, there is an accumulation of fluid in the canal.

Purgation will not ensue if water be withheld from the diet for one or two days previous to the administration of the salt in a concentrated form.

Unless the solution of the salt is more concentrated than 10 per cent. it excites little or no secretion in the stomach.

The salt excites an active secretion in the intestines, and probably for the most part in the small intestines.

The bile and pancreatic juice participate but very little in the secretion.

The secretion is probably a true *succus entericus*, and is promoted by local irritation, while absorption by the intestine generally is reflexly stimulated by such irritation. As this secretion contains a very small proportion of organic matter as compared with the inorganic matter, the purgative removes more of the latter than the former from the blood. In certain cases a large quantity of the salt in the blood is thus evacuated.

The salt, after some hours, causes diuresis, but the amount of the normal constituents of the urine is not affected.

Good Remedies out of Fashion.—In an address on this subject delivered at the Annual Meeting of the Metropolitan Counties Branch of the British Medical Association, by the President, Dr. C. J. Hare, late Physician to University College Hospital, the lecturer made some interesting observations on emetics and bleeding.

"It is not long ago that in a very urgent case of bronchitis, I advised the administration of an emetic, when the gentleman whom I had been called to meet in consultation said, 'Why, I never gave an emetic to an adult in my life.' In former times, it was not unusual, on the contrary, to commence the treatment of many diseases with the administration of a dose to procure vomiting ; and although the remedy might then be given sometimes indiscriminately and according to routine, only those who have seen the effects of emetics, properly and judiciously given, can conceive the beneficial effects they sometimes produce. In the early stage of an attack of croup, it was by no means unusual to give an emetic of tartarized antimony or of ipecacuanha ; and it is in accordance with the recorded experience of some of the best authorities and most practical men, and quite consonant with my own experience too, that symptoms which presented the most certain augury of a severe attack were by these means cut short ; the hoarse voice resumed its natural character, and the feverish symptoms were in a few hours relieved. I know quite well that a great fear is entertained by some as to the depressing effects of emetics ; but the fear is theoretical, and not practical, and those who have had most

experience in the administration of them best know how groundless the fear is. In diphtheria, too, I have seen the false membranes which are out of the reach of local remedies, and which the patients cough and cough in vain, and utterly exhaust themselves to get quit of, readily brought up by the action of vomiting, to the immense relief of the sufferer.

"In suffocative bronchitis, the effect of emetics is sometimes magical, and by their administration in such cases not only is immense relief given, but I verily believe—I am certain—that lives are saved. You are called to a patient who has been ill a few days, with increasing dyspnœa; she is sitting up in bed (I draw from nature), for to lie down is impossible; she is restless, and tossing about; the lips, and indeed the whole face, blue; the eyes watery and staring; the pulse quick and small; the cough constant; the expectoration semi-transparent and tenacious; over every square inch of the chest, front and back, from apex to base, you find abundance of rhonchi; moist, sonorous and sibilant ones in the upper part of the lungs, and muco-crepitant or mucous *râles* towards the bases. Ammonia and stimulants, right and good in their way, perhaps, in such a case are too slow in their action; the patient is, in fact, more or less slowly, more or less rapidly suffocating. An emetic of twenty-two grains of ipecacuanha in an ounce of water is given; in ten or fifteen minutes the patient vomits, and brings up a huge quantity of that tenacious mucus, and the whole aspect of the case is altered; the distressed countenance is relieved; the breathing is at once quieter; and the patient is able, for the first time for the past twenty-four hours, to lie moderately low in bed, and to get some sweet, refreshing sleep. The patient is, in fact, rescued from the extremest peril, and in this case, and in many similar ones, too, I believe, from otherwise most certain death. Of course, in such cases the emetic is not given for its effect on the stomach, but for its collateral effect in mechanically clearing out the enormous amount of secretion which accumulates in the bronchial tubes, and which the patient is otherwise quite incapable of getting quit of; and thus the half-choking, almost asphyxiated condition is changed for one of comparative comfort, and time is gained for the action of other appropriate remedies. No doubt the secretion may, and often will, accumulate again; and I have not hesitated again in bad cases to repeat the same good remedy; but it is a fact, and a very positive one, too, that, quite contrary to what those who have had no experience in the plan suppose, the system rallies instead of being more depressed under the action of the remedy.

"There is a class of cases in which the right heart is engorged with blood, and in which the only hope of rescuing the patient from death is by bleeding. A man of middle age (I again draw from nature) has considerable chronic bronchitis, with some congestion of the lungs, and, like many other unwise persons, he goes to a southern watering place, instead of remaining in his room and in an uniform temperature. Becoming worse, he determines to return home, and travels on a cold spring day; his dyspnœa is so much worse on the journey, that his friend and fellow-passengers doubt whether he will arrive home alive; and when his carriage meets him, it is with the greatest difficulty he is conveyed to his house and got into his drawing-room. You are at once sent for, the message being that the patient is dying, and when you arrive you find that that is the fact. He is sitting in a chair (to lie down is impossible for him), his face is blue and swollen, his lips purple, the eyes suffused and staring; his heavy, gasping breathing you have only too distinctly heard and recognized as you ascended the stairs, and when you see him you find his chest heaving, and each short, gasping inspiration followed by a long wheezing and moaning expiration; his lungs are full of moist sonorous, and mucous and submucous rhonchi, and scarcely a trace of vesicular respiration is to be heard, and he is pulseless. He looks to you beseechingly, and gasps out, in scarcely articulate words, that he is dying. This is but too true. Now, the treatment for such a condition at the present day is "to pour in stimulants" (though the patient can scarcely swallow). Brandy and water are given, and ammonia, and perhaps ether; then, if the patient live long enough to have them made, mustard poultices are applied to the chest, and to the calves, and to the feet, and the patient is fanned, and the patient dies. Something has been done, but that which true pathology—and, indeed, common sense, unshackled by prejudice, custom, and fashion—would dictate, has been left undone. Appearances have been saved, but not the patient's life.

"The fact is, that here the danger lay in the right side of the heart being gorged with blood, so that it was impossible for its stretched and distended walls to contract and to propel forwards the thick and blackened blood. Oh, as you value your patient's life, as you value the blessed consciousness of being a minister who has done everything possible for his welfare, let me beg of you not to be contented with the futile treatment of to-day; relieve that poor oppressed distended heart, and all may be well. Open one of the veins which are, with every systole of the heart, tending to carry more and more blood to this already distended right ventricle, and all may yet be well with your patient. Sometimes this blood-letting in extreme cases is no easy matter. It may be neccessary, before you can effectually open the vein, to place the patient's arm in warm water, so as sufficiently to distend the vein; and even when the ligature has been efficiently applied, and the vein well opened, you may have to press and squeeze and rub upwards the arm before a drop of the thick and tarry blood will flow. But, when it does flow at length freely, oh, what a marvelous change may you see take place. The breathing becomes quieter, deeper, and less noisy—the haggard face resumes the appearance of tranquility, the blueness of the skin is replaced by a more natural tint; the pulse becomes more and more distinct, and, in a word, the choked-up heart is set free. This is no fancy picture. Every word is simple truth, and I appeal for confirmation to the memory of every senior member present who recollects the experience of his earlier days, and who can

also probably tell you that the after progress of such cases was sometimes almost miraculously rapid, so that in a few days even, the patients might become convalescent."—*British Medical Journal.*

MINERAL WATER INHALATIONS.—W. G. BLACK, F.R.C.S.E., describes in the *Medical Press and Circular*, of July 18, the system adopted in pneumatic affections at Bournemouth as similar to that used in some Spas abroad. The mineral vapor is introduced into large rooms, with cemented walls and stone floors, and the windows and doors are closed for the short period of inhalation required by the patients sitting inside them. The vaporization is chiefly effected by spray machines, so that the temperature of the inhaled mixture of air and water is kept at a moderate degree, and within physiological limits for absorption by lungs and skin. The invalids at their hotels dress in flannels, and are carried in closed sedan-chairs to the inhalation chamber, where they sit down on the benches or chairs to inspire the vapor, or walk about to and fro on the floor. After a quarter of an hour's treatment the chamber is opened, and the patients return to their hotels. The vaporization being effected by the spray machine, along with air or steam, as the motive power of the blast, the temperature need not necessarily be at an uncomfortable height for sustaining its maintenance and respirability along with common air.

THE COUVREUSE OR MECHANICAL NURSE—After two years' trial, says the *Lancet*, the *couvreuse* has proved so decided a success that a brief description of this ingenious contrivance may be desirable. It was in 1878 that Dr. Tarnier, when visiting the apparatus devised by M. Odile Martin for artificially hatching and rearing chickens at the Jardin d' Acclimation, suggested that a similar method might be applied with advantage to infants, especially in cases of premature birth. Two years elapsed, however, before any attempt was made to carry out this proposal; but in the course of the year 1880, a *couvreuse* was made, and brought to the hospital of the Materniteé. This is a plain wooden case or box, measuring about 2 ft. 8 in. by 2 ft. 4 in. and 2 ft. 4 in. in height. The box has a double covering, the space between being filled with sawdust to retain the heat, and is divided into two parts. The lower half contains a reservoir, which holds about sixty liters of water, and is fed by a patent boiler that stands outside the box, and is warmed by an oil lamp; or hot water may be used without recourse to the lamp. The upper portion of the box forms a warm chamber, where a little basket or cradle is placed, large enough to hold two infants. From an opening at the side, this cradle may be withdrawn, while the top of the box has a double glass covering, so that the children and the thermometer lying by their side can be constantly watched. If the water used in the first instance is cold, it takes a long time to attain the required temperature; but once this is done, the lamp need only be re-lit three or four times during the course of the day. It is best to warm the apparatus while the infants are being fed or washed. The temperature within the *couvreuse* is generally maintained at 86° F., and, though the contrast on withdrawing the child to be fed or washed is very great, amounting often to 30° F., colds are not so frequent as among the infants nursed in the ordinary manner. Altogether the experiment is considered so successful that it is proposed to supply all the hospitals of France with a *couvreuse*, and there is every reason to anticipate good results from this measure. Nor is this all. A small portable *couvreuse* is now about to be tried, which could be carried by hand from house to house. After this we shall probably have perambulators constructed on the same model. In conclusion, we should remark that, though no very careful experiments have been made with respect to the ventilation within the *couvreuse*, yet this is evidently sufficient. Apertures are made in the lower portion of the box, the fresh air travels over the hot-water reservoir, and is thus warmed before it reaches the child. The very great difference of temperature within the *couvreuse* insures a constant current of air, though the child is protected by its cradle and clothes from any draught.—*New York Medical Journal.*

THE celebration of the one hundredth anniversary of the establishment of the medical school of Harvard University, and dedication of its new building, will take place October 17, 1883.

PROGRAMME.

I.—MASSACHUSETTS INSTITUTE OF TECHNOLOGY, HUNTINGTON HALL, AT 11 O'CLOCK A. M.

Address by the President of the University.

Oration by Emeritus Professor Oliver Wendell Holmes.

Presentation of a Portrait of Professor Holmes and a Bust of Professor Henry J. Bigelow.

II.—MEDICAL COLLEGE, BOYLSTON STREET.

Prayer by Rev. A. P. Peabody, D.D.

Dedication of the new building to the purposes of medical instruction.

Reception of subscribers to the building fund, and invited guests, by the Medical Faculty.

Exhibition of the building.

Lunch will be served from 1 to 2 P. M.

DR. JAKSCH, of Vienna, formerly Professor Nothnagel's assistant, has been made a Privat-Docent in medicine; Professor Schwalbe, of Königsberg, becomes Professor of Anatomy, succeeding Professor Waldeyer at Strassburg.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM SEPTEMBER 7, 1883, TO SEPTEMBER 14, 1883.

Banister, J. M., First Lieutenant and Assistant Surgeon, assigned to duty at Fort Adams, R. I. (par, III, S. O. No. 170, Department of the East, September 10, 1883).

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, SEPTEMBER 22, 1883.

PREVALENCE OF EPIDEMIC AND INFECTIOUS DISEASES—Although vessels have recently arrived at the quarantine stations both of Portland and New York, with cases of yellow fever on board, the disease has not been communicated to any new place in our country outside of the quarantine stations. It continues to prevail to a limited extent at the navy yard near Pensacola, but the city is still reported healthy and free from cases of the disease. The cholera plague is steadily diminishing in Egypt, although the question whether it will make its appearance in Europe and this country during the next summer continues to be discussed with earnestness on both sides of the Atlantic. Yet the question is one that no individual can answer until the season comes. If the coming summer should be characterized by a persistent temperature, decidedly above the average, and any place in Europe or America should allow such an accumulation of unsanitary influences as existed at Damietta, and in most of the centers of population in Egypt during the summer just past, they may rely, with much certainty, on reaping a harvest of death, either from epidemic cholera, or its equivalent. For notwithstanding all the theoretical assertions that the cholera can originate *de novo*, only in the valley of the Ganges, there is nothing in the history of past epidemics, nor in the known laws of nature, which go to show that the same combination of high temperature, decomposing animal and vegetable matter and aggregations of unsanitary people, that give rise to cholera on the banks of the Ganges, will not just as readily produce it on the banks of the Nile, the Hudson, or the Mississippi. On the other hand a strictly sanitary people, supplied with pure water and living on a clean soil, need suffer no great anxiety about a visitation of cholera at any time. We would have all the avenues by which infectious diseases could be introduced from infected places into our country, guarded by a rigid system of marine inspection, detention and care of the sick, and the thorough enforcement of marine hygiene in regard alike to ships, cargoes and passengers. But we would not have it forgotten that the safety of every community so far as regards the prevalence and fatality of infectious diseases depends mainly on its own local sanitary condition.

COLLEGE APPOINTMENTS.—Owing to the continued ill-health of Professor J. S. Jewell, who has filled the Chair of Mental and Nervous Diseases in the medical department of the Northwestern University, better known as the Chicago Medical College, for many years, he has been appointed Emeritus Professor of Psychological Medicine, and Prof. Walter Hay has been transferred from the Chair of Materia Medica and Therapeutics to that of Mental and Nervous Diseases and of Medical Jurisprudence. During the long period that Professor Jewell has been connected with the college in the capacity of an active teacher, he has filled the positions assigned him with an ability and enthusiasm rarely equaled. And it is hoped that one or two years rest from such labor will enable him again to give the college the the benefit of active service. The Chair of Materia Medica and Therapeutics made vacant by the transfer of Professor Hay has been filled by the appointment of W. E. Casselberry, A.M., M.D., of this city. The new appointee is a man of classical general education, and he has availed himself of the best advantages to be had in this country and Europe in special preparation for the duties of his new position. He has given evidence of rare ability as a teacher, and will be a valuable addition to the Faculty of one of the best medical schools in this country.

THE TRI-STATE MEDICAL SOCIETY.—As this number is going to press, this important medical organization is holding its annual meeting in Indianapolis. An account of its doings will be found in our next number.

PROGRESS OF STATE MEDICINE.

INDIANA.—From the replies made to the questions proposed by the chairman of the Section on State Medicine, by Dr. T. M. Stevens, of Indiana, we learn that a law was passed by the legislature of that

State, creating a State Board of Health, and providing for the creation of county, town and city boards throughout the State, in 1881. At the time of making his report to the chairman of the Section, previous to the meeting of the Association in Cleveland, in June last, he states that ninety-one of the ninety-two counties constituting the State, had formed auxiliary health organizations by electing a county health officer. And 235 city and town boards had been organized prior to May, 1882. The health law of this State somewhat resembles those of Michigan and Wisconsin.

Missouri.—Dr. E. W. Schauffler, of Kansas City, Mo., reports in regard to the progress of medical and sanitary legislation, as follows:

Answers to first and second points:

The first legislation in Missouri in regard to a State Board of Health, or its equivalent, was an act passed at the session of 1883, and approved March 29, 1883. This law, under a general constitutional provision, will go into force July 1, 1883, so that until that time there can be no Board of Health. The act provides in general as follows:

For the appointment by Governor, with consent of senate, of seven persons, to constitute the "State Board of Health of Missouri;" members to hold office for seven years (of the first seven, however, four shall hold for two years and three for four years) Governor to fill vacancies, which shall be confirmed by senate at next session.

Five of board, at least, shall be "physicians in good standing, and of recognized professional and scientific knowledge, and graduates of reputable medical schools," and must be residents of the State for five years preceding. In appointments there shall be no discrimination made against the different systems of medicine "recognized as respectable by the laws of this State."

The board has general supervision over "health and sanitary interests of the citizens of the State." Their duty to recommend such laws to the General Assembly as they "deem necessary to improve and advance the sanitary condtion of the State." To make similar recommendations to municipal authorities of any city, or to county courts.

Board has power by majority vote to "establish quarantine regulations" against any city or district in the county when satisfied that any "malignant, contagious, or infectious disease exists" in such city or district to such extent as to endanger the lives of citizens of Missouri, having direct communication with such infected city, etc.; and may make rules to prevent introduction and spread of such disease, and may call on any executive officer to enforce such rules, and it is made duty of all executive officers of State, sheriffs, constables, etc., to assist the board to carry out provisions of this act.

Board to give public notice of such diseases being epidemic, and of rules established, and any persons "resisting by force" snch regulations, may be fined from $10 to $500 for each offense.

Board to have supervision of registration of births and deaths; shall prescribe such forms and recommend such legislation as shall be deemed necessary for a thorough registration of vital and mortuary statistics through the State. Secretary of the board shall be superintendent of such registration.

All physicians, accouchers, etc., to register names with county clerk, and shall, under penalty of fine of $10, report to county clerk within thirty days of occurrence, all births and deaths coming under their supervision, with certificate of cause of death, and such other facts as board may require.

When birth or death takes place without attendance of physician, etc., same shall be reported by certain relatives, under penalty as above.

Coroners shall do same in regard to deaths coming under their supervision,

Board to prepare and furnish to county clerks printed forms of certificates of births and deaths, as they deem proper, and such reports to be given to persons required to make reports.

County clerks to provide books for registration of above data, and at end of each year to send copies of same to secretary of board.

Meetings of board to be in January and July, and when expedient, four members a quorum; shall choose from own number president, vice-president and secretary, and may adopt rules and by-laws. Secretary's duties to be prescribed by board and this act, and salary fixed by board; also, shall receive his traveling and other expenses in execution of official duties, as shall all members of board.

Board shall take cognizance "of any fatal diseases prevalent among domestic animals of this State, and ascertain nature and cause" thereof, and publish results of research, with suggestions as to treatment and remedy therefor.

President of board has power to administer oaths and the board to take testimony.

Board to make annual report to governor, including such information on subjects within jurisdiction of board as may be thought useful by board, "for dissemination among the people," with suggestions for legislative action.

Six thousand dollars appropriated for expenses under this act.

There is nothing, so far as I can learn, in the statutes of Missonri declaring what diseases are held to be communicable or dangérous to public health.

North Carolina.—To the questions of the Chairman of the Section, Dr. C. W. Woollen, of Randleman, N. C., makes the following brief reply:

Dear Sir: I herewith enclose you a brief of what I regard as covering the ground, as per statement forwarded to me:

1st. We have a State Board of Health in North Carolina.

2nd. No changes during the past year.

3rd. We have local organizations in many of the counties, but the exact number cannot be given.

4th. No changes that I see noticed.

Small-pox and yellow fever occasionally on our sea coast.

5th. No new laws nor amendments of old laws in relation to vital statistics.

How can medical men *best* promote sanitary progress? First, by denouncing the use of *whisky* and *tobacco* in *toto*, together with many other vicious habits indulged in by the people. The family physician can do much, perhaps more than other persons, to improve the habits of the younger members of families he visits, as a physician, by calling their attention to those vicious habits which he may observe in any of them, that they may be corrected at once before the habit is fully formed.

Explain to them the terrible consequences that must necessarily follow the continued use of these dreadful poisons.

I do not feel prepared now to venture an opinion on the second part of the great question for consideration at our next meeting, at Cleveland, Ohio, June 5, 1883.

MINNESOTA.—The report from this State consists of a printed copy of the law passed by the Legislature, and approved March 3, 1883, entitled "an act relating to infectious and epidemic diseases, and to the preservation of the public health." The law contains thirty-one sections, and makes provision for a State Board of Health, and local auxiliary Boards throughout the State. If carried out efficiently, it should give the State a thorough health organization.

MISSISSIPPI.—The report for this State also consists of a copy of the recently enacted laws for the establishment of a State and local Boards of Health, and the protection of the people from the introduction of contagious and epidemic diseases.

BOOK REVIEWS.

ON THE PATHOLOGY AND TREATMENT OF CERTAIN FORMS OF NERVE WEAKNESS. BY C. L. DANA, A.M., M.D., Professor of Mental and Nervous Diseases, etc., etc., etc.

This is a pamphlet of twenty-eight duodecimo pages, reported from the *Medical Record* of July 21, 1883. The author includes under the head of "Nerve-weakness" the following divisions or varieties of nervous disorder:

I. "*Nervousness.*—Characteristics: A general irritable weakness of brain, cord, etc., special neuro-mechanisms not seriously and chronically affected so as to react and increase the general trouble.

II. "*Neurasthenia* (nerve-enfeeblement proper).—Characteristics: 1, irritable weakness of nerve-centers and mechanisms; 2, or absolute weakness of same; 3, a localization of the disease in various neuro-mechanisms, causing special (gastric, sexual, etc.) forms of neurasthenia, which react to keep up the disease. The phenomena of lessened resistance, of enfeebled controlling centers enter into the disease more or less.

III. "*Hysteria* (a neurosis and psychosis combined, but more the latter).—Characteristics: 1, a 'shelving-off' of higher controlling powers; 2, greatly increased irritability (with weakness) of lower centers, especially (*a*) emotional, (*b*) spinal reflex, culminating in *convulsions;* 3, localized disturbances of vorious neuro-mechanisms (motor, cardiac, gastric, sexual, etc.), these disturbances being more acute, more variable, more pronounced than in neurasthenia proper; 4, special irritability of nerve-centers to sexual stimuli.

IV. "*Hypochondriasis.*—Characteristics: 1, special sensitiveness (*i.e.*, increased irritability) of emotional and perceptive centers to visceral and sensory impressions (morbid self-concentration); 2, lesséned resistance and overflow of visceral and sensory impulses."

In regard to the "fundamental changes, anatomical and chemical," in these so-called varieties of nerve-weakness or grades of neurasthenia, he says:

"Thus we can say with some confidence that underlying these disorders there are the following conditions:

1. "An imperfect tissue nutrition and metamorphosis, a kind of tissue-dyspepsia which results in making the nerve molecules unstable.

2. "Coincidently there is often, if not always, some derangement in vascular supply. This vascular change, I venture to say, is always an anæmia or a venous hyperæmia; true hyperæmia is not present, except incidentally and temporarily in chronic functional nerve-weakness, since it is always the correlative of increased functional power.

3. "Some permanent chemical changes are very likely present. These changes cannot be great as regards the nerve-elements themselves, for all tissues, as long as they act and preserve their identity, must have about the same composition. I doubt if the balance of the chemists will ever tell us what are functional diseases. But the chemical products of tissue activity may be altered, as shown by the character of the excretions."

These propositions certainly do not add much to the clearness or extent of our knowledge of the real pathology of a large class of very common nervous disorders. The word "dyspepsia" is sufficiently indefinite when applied to the functional disorders of the stomach, and it is still less comprehensible when applied to the atomic or molecular changes in the organized structures. It has seemed to us that many of the cases of nervous exhaustion or neurasthenia of the present day were genuine cases of morbid increase of the inherent or elementary susceptibility of the nerve structures, instead of either exhaustion of nerve force of vascular anæmia. In a large proportion of cases the predominant symptoms are the result of exaggerated impressions or effects of causes acting in only moderate or natural degrees of itensity. For instance, the stimulus of a degree of light, sound, or mental action, which in the natural state of nerve susceptibility would produce only pleasant and ordinary effects, in those cases of so-called neurasthenia produce effects so exaggerated as to constitute morbid phenomena, more or less distressing to the patient. To call such morbid excitability or increased susceptibility to impress-

ions in any part of the nerve structures either weakness or anæmia appears like perverting the ordinary meaning of terms. Neither do many of the patients usually included in this class show any of the ordinary indications of either defective nutrition or of blood impoverishment. We think there is need of greater discrimination between these cases of increased nerve susceptibility, and those presenting actual anæmia and weak or impaired excitability, if we would adjust treatment in such a way as to attain the highest degree of success.

The same author, in a brief paper read at the recent Annual Meeting of the American Neurological Association, gives the result of his experience in the use of hydrobromic acid in various nervous affections. In this paper, as reprinted from the *Journal of Nervous and Mental Diseases* for July, 1883, his clinical results are stated as follows:

"I have now used hydrobromic acid in the treatment of various nervous affections for nearly two years. At the Northeastern Dispensary the druggist informs me that the amount prescribed for the class of nervous diseases exceeds three pounds a month. I have used it in over fifty cases, of which I have notes, besides others.

These cases were:

Epilepsy	6	Chorea	2
Alcoholism	2	Insomnia	3
Headache (congestive)	1	Hysteria	3
Headache (malarial)	4	Post-hemiplegic cerebral (vascular) disturbances	3
Spermatorrhœa	2	Senile melancholia	1
Vertigo	6	Paralysis agitans	1
General nerve-weakness (nervousness)	6	Total	52
Various forms of neurasthenia (sexual, gastric, cerebral)	12		

"*Hydrobromic acid in epilepsy.*—When I first began to use hydrobromic acid in epilepsy, I was greatly encouraged by the result. The first of my six cases was a most obstinate one, a young man of 20, who had suffered from grand mal and petit mal since his 9th year. He had run the gauntlet of several nerve-clinics in the city, and had been assaulted by all the anti-epileptic remedies in the pharmacopœia. He was having attacks every day, sometimes several in the day. Under the acid he often went from one, two or three weeks without any fit. He was given the acid for six or seven months, in doses of ʒ iv-ʒv a day. After a time it began to lose its hold, and I added oxide of zinc. Finally the patient passed out of my care. He subsequently died in a convulsion.

"In three succeeding cases the disease was much milder, and the attacks came on only once or twice a month.

"In these cases the acid stopped the fits for a time at least, and as long as they were under my care. I subsequently lost sight of them.

"In two remaining cases there was no great benefit. Both of these patients suffered from both the grand mal and petit mal, and were old and obstinate cases. One of them when put upon very large doses of bromide of sodium did better than upon the acid. In the other the acid seemed to do nearly as well as the bromide. The convulsive attacks were nearly stopped, but the petit mal could not be controlled.

"I think that in epilepsy hydrobromic acid can not be used as a substitute for the bromides, except in the more controllable cases, when one wishes to keep up a mild sedative effect for a long time. Yet, it undoubtedly has an influence over the disease, and I do not yet feel certain that if given in equivalently large doses it might not be as efficient as the alkaline salts.

"*In chorea.*—Hydrobromic acid can be used advantageously as a medium for the use of arsenic or nux vomica, when it is desired to give a sedative. Doubtless an ordinary solution of arsenious acid in hydrobromic acid is quite as good as the much-vaunted formulæ of Clemens and Gilliford.

"*In alcoholism.*—The acid failed in two cases of acute alcoholism, the patients being on the verge of delirium tremens. Bromides and chloral subsequently gave relief.

With quinine to prevent cinchonism.—Hydrobromic acid is a good solvent for quinine, but it does not, according to my experience, prevent cinchonism, as has been asserted—certainly not in the small doses usually prescribed.

The best results which I have obtained from hydrobromic acid were in conditions of nervous irritibility, congestive headaches, post-hemiplegic circulatory disturbances, irritable heart, stomachal vertigo, where a general nervous and vascular sedative is indicated.

In most cases of insomnia it also acts well. I would say positively that I can give the acid with just as much confidence that it will produce nervous sedation as when the alkaline bromides are prescribed.

Its advantages are that in moderate doses it is not disagreeable; it does not constipate, or irritate the stomach; it may be given when an acid is indicated for the stomach. It can be conveniently prescribed with iron and tonics. Finally, in the largest doses, long continued, I have never seen any sign of bromism or any disagreeable constitutional effect, other than some drowsiness. A disadvantage is that when very large doses are to be administered, the amount of acid to be taken is disagreeable."

THE COLLECTIVE INVESTIGATION RECORD. Edited for the Collective Investigation Committee of the British Medical Association. By PROF. HUMPHREY, M.D., F.R.S. Chairman; and F. A. MAHOMED, M.B., F.R.C.P., Secretary of the Committee. Printed and published by the British Medical Association, 161A, Strand. July, 1883. Price 2s.

This is the first number of a record designed for embodying the results of the collective investigation work now being prosecuted on a systematic plan in Great Britain, the prominent features of which were presented in our editorial columns of a recent number of this JOURNAL. The present number of the *Investigation Record*, contains 190 pages, embracing a short history of the Collective Investigation movement, addresses by Sir W. Gull and Sir James Paget, a Report on the Communicability of Phthisis; preliminary Reports on Acute Pneumonia, on Chorea,

Acute Rheumatism, and Diphtheria; communications on "A calculation of the probability of the accidental and fatal incidence of phthisis upon both husband and wife," and on "The collective investigation of disease," together with several other items of interest, to some of which we shall recur hereafter.

MASSAGE; ITS MODE OF APPLICATION AND ITS EFFECTS. By DR. DOUGLAS GRAHAM, of Boston, Mass. Reprinted from the *Popular Science Monthly*, October, 1882. New York: S. H. Vail & Co.

This is a well written plea in favor of massage as an important remedy in the treatment of certain chronic morbid conditions, and the necessity of distinguishing it from mere indiscriminate rubbing. Though written more particularly for non-professional readers, it may be read with profit by all. It is a pamphlet of 17 pages.

WHAT IS THE RATIONALE OF TRACTION AND COUNTER-TRACTION IN THE TREATMENT OF HIP-DISEASE. By A. B. JUDSON, M.D., Orthopædic Surgeon to the Out-Patient Department of the New York Hospital. Reprinted from the *Medical Record*, May, 1883, pp. 12.

THE FIXATIFE POWER OF TRACTION, IN THE TREATMENT OF HIP-DISEASE. By A. B. JUDSON, M.D., etc., etc. Reprinted from the *Medical Record*, July, 1883, pp. 17.

These two pamphlets from the pen of Dr. Judson, present an able and interesting discussion of the important practical points indicated by their titles.

BOOKS AND PAMPHLETS RECEIVED.

Studies in Biological Laboratory of Johns Hopkins University.

Report Pennsylvania Hospital.

A Tracheotomy Tube for Gradual Withdrawal. By H. F. Hendrix.

Proceedings American Pharmaceutical Association, 1882.

Transactions of the Medical Society of Pennsylvania, 1883.

Transactions of the Medical Society of Tennessee, 1883.

Report on Diseases of Women from the First Congressional District. By R. J. Munn.

Nerve Inhibition. By H. O. Thomas.

Report of the Surgeon-General of the Navy, 1881.

MEDICAL SOCIETY PROCEEDINGS.

STATE MEDICAL SOCIETY OF WISCONSIN.

An adjourned meeting of the State Medical Society of Wisconsin was held in the city of Milwaukee on the 4th, 5th and 6th of September. This meeting was, to all intents and purposes, the thirty-seventh annual session of the Association, which should have been convened in May last, but was postponed to the above mentioned time.

Dr. T. P. Russell, President of the Society, was absent upon a European tour, and the usual presidential address was therefore dispensed with. Dr. D. Mason, of Milwaukee, Vice-President, presided.

Dr. J. S. Walbridge, of the Committee on the Practice of Medicine, made a report which dealt more especially with the forms of fever prevalent in Wisconsin and its vicinity. He claimed that they were chiefly malarial in type, even though such symptoms as intestinal hæmorrhage might occur in their course, and post-mortem examination might reveal ulcerated peyerian glands. Reference was made at some length to the means employed in treating the fevers in question, quinine and the cold sponge bath being apparently those in which the reader had most confidence. The thermometrical indications in each case were to be carefully regarded, but caution must be exercised in respect to the instrument used, some of the clinical thermometers in the market being very untrustworthy.

Dr. Walbridge considered it the duty of the general practitioner, who had but few facilities for entering upon the investigation of the more profound problems offered by pathology or physiology, to note and record for the benefit of his professional brethren the effect of therapeutic agents, for the observation of which his opportunities are many.

The most important field of laboratory research at present is the microscopic, and, by reason of the revelations now being made therein, it seems possible that our whole system of therapeutics will be profoundly modified in the near future; that the study of the various forms of zymotic disease will be for the first time placed on a scientific basis, and preventive medicine will take a higher place than it has ever yet assumed in the estimation of the practical physician.

Dr. Senn thought that whenever a post-mortem showed ulcerative change in Peyer's patches the fever was typhoid in character, and that there was more danger of mistaking typhoid fever for fever of malarial type than of supposing a malarial case to be one of typhoid. In children the typhoid fever was the more common.

Koch has proved that the way in which bacilli or micrococci act is by producing a change in the white blood corpuscles, by which change their adhesive powers are increased, and embolism and metastatic abscesses are produced.

Such anti-pyretics as quinine, salycilic acid, etc., produce the reduction of temperature by retarding tissue metamorphosis. Kairin was among the most valuable of the anti-pyretics, but its great cost at present was an obstacle to its general employment.

Dr. Stansbury agreed with Dr. Senn in the opinion that typhoid fevers were more common than those of malarial type in the Northwest, but thought that, especially in the milder cases, all the characteristics of true typhoid were not present. He thought that the non-malarial character of the disease was demonstrated by the fact that quinine had but little influence upon its duration. He had found that an

expectant form of treatment gave better results in his own personal practice than would be obtained from any active measures such as large doses of quinine, etc.

Dr. Manley had used quinine in large doses with decided advantage. In one instance he had given 20 grs. at night to a boy aged 13 years, in whom the premonitory symptoms of scarlet fever in violent form were present, and had repeated the dose on the following morning and had cut the disease short thereby.

Dr. Wenzel questioned the propriety of using quinine in such doses as 40 and 50 grs; he thought there might even be danger to life; certainly there was risk of permanent injury to the hearing.

Dr. W. considered the prevaling type of the fevers most often seen in the Northwest to be typhoid, or low, continued fevers. He did not think that malaria in this latitude amounted to a great deal, because the summer heat was not sufficiently prolonged or sufficiently intense to develop the malarial germs. Among the anti-pyretics he thought that digitalis was entitled to a very high place, and that it had particular value in bad cases of typhoid or continued fever.

Dr. Steele thought that, though there might be a tendency to the increase of typhoid in sections of the country where the population was extending and the climatic changes incident to cultivation of the soil were going on, typhoid was a very uncommon disease in his own section of the State. He considered the type of the prevalent fevers in Northern Wisconsin to be malarial, and that they might be often quickly broken up by the early use of quinine in doses of 10 or 15 grs. daily.

Dr. Day said, recurring to what Dr. Walbridge had said in regard to the use of cold water sponging as a means of lowering temperature, that in his own practice he preferred to use hot or warm water for that porpose, having found that when cold water was employed execssive reaction was liable to occur.

Dr. French had doubts of the utility of cold water sponging so far as the reduction of temperature was concerned. By means of a cold bath prolonged for an hour, he had brought the temperature down in one case from 105° to 103° permanently. He agreed with those who considered the malarial form of fever as being comparatively the more frequent in occurrence.

Dr. Barnett could not admit that typhoid fevers were rarely or never seen, but neither could he agree with those who classed all of our low continued fevers as being of typhoid type. He thought that remittents were the more frequent in occurrence.

Dr. Davies believed that a change was taking place in the type of fever generally. Typhoid was now seldom seen in his neighborhood, whereas, fifteen years ago, it was very prevalent. Remittents he often met with. He thought that he might in the aggregate use as much quinine as other physicians, but he did not favor the enormous single doses he had heard mentioned.

Dr. Brett had seen in the course of eleven years' practice at Green Bay, many cases that had all the characteristics of typhoid, while during the same time he had seen but a single case of typical malarial fever.

Dr. Dodson had had many typical instances of typoid, but thought that almost all kinds of sickness were modified more or less by malarial influences. He had no fear of large doses of quinine, having given from 45 to 60 grains in two doses with only a half-hour interval between them, and had repeated the same treatment on the second day if the fever rose to a dangerous height.

Dr. Manley considered that true typhoid fever often occurred, though it might be that *well-marked typicäl* cases were comparatively rare. In his own practice he had seen cases which he thought could be traced to the use of infected water for drinking, and thought that such use was quite common.

Dr. Hoyh was familiar with typhoid fever as it occurred in Norway, where malaria is unknown, and had, during a practice of 14 years in La Crosse, frequently seen cases of typical typhoid fever, identical in all respects with the disease as seen in Norway, the identity being further established by post mortems, while he could not recall a single case of distinct remittent fever. He thought typhoid contagious, and considered that quinine had little if any value in its treatment.

Dr. Mann, of the Committee on Practice of Medicine, reported a case of typhoid fever followed by an enlargement of one leg which presented all the symptoms of phlegmasia alba dolens. The swelling was attended by great pain, particularly along the track of the femoral vein. Pneumonia also supervened, but the patient finally recovered.

Dr. Senn thought that the swelling in such instances was due to thrombosis of the femoral vein, caused by a deficiency in the *vis a tergo*, while a septic phlebitis produced the condition known as "milk leg."

Dr. Barnett remarked that Stokes considered that such swellings of the leg as that reported by Dr. Mann were exactly the same as the swellings which sometimes follow parturition, and said that Stokes had actually called both conditions phlegmasia alba dolens. Dr. Barnett had seen such cases as Dr. Mann described.

"The Pathology and Morbid Anatomy of Tuberculosis," was the subject of a communication presented at the meeting of 1882 by Dr. Senn, and it was decided at that meeting to postpone the discussion of the subject to the present session. Dr. Meacher, in opening the discussion, said that pathologists were yet at variance upon the question whether tuberculosis itself were inherited or only a predisposition thereto, and that the best clinical observers were as yet in doubt. In a recent number of the *Lancet* was an article, in which the writer said that experience does not teach us whether tubercular disease is inherited, or whether the soil is simply made ready for it. In some cases it seems to break out after many years and without exposure.

Dr. Senn said that Koch had demonstrated the cause of tuberculosis by actual experiment; that this inciting cause is a bacillus, which induces a specific inflammatory process. There may be an hereditary

predisposition, but this may be successfully resisted if the general system be robust; while, on the other hand, a fertile soil is ready for the occupancy of any tuberculous bacilli that may find entrance, if the system generally be debilitated. Such hereditary predisposition consists in a peculiar anatomical arrangement of cells. The bacillus, or micrococcus, enters the white corpusclus of the blood, where it effects a deleterious alteration of character, which determines a specific inflammatory process, produces embolus, and favors local congestion.

From the Committee on Surgery, Dr. Meacher presented a report of a case of lithotrity, and a paper on Antiseptics. Dr. Meacher considered the best antiseptics to be carbolic acid, iodoform, and corrosive sublimate. He also called attention to the value of absorbent cotton as a surgical dressing. He did not attach any very great importance to the carbolized spray, even in operations in which some surgeons thought it indispensable, and stated that the results of his own practice justified its omission.

Dr. Binnie reported a case of strangulated female hernia, which was operated npon with the result of forming an artificial anus. The patient made a good recovery with the closure of the opening in the course of three months.

Dr. Binnie favored early operation in similar cases before the strength of the patient was exhausted by efforts at reduction. Such early operation, the subject being otherwise in good condition, was attended with less risk than an operation after prolonged taxis.

Drs. Stansbury and Reynolds considered that reduction was usually practicable, especially when opiates and anæsthetics were used, and preferred not to operate until it was certain that taxis was useless.

Dr. Catlin had used an elastic rubber bandage with success in reducing an obstiuate hernia. The prolonged and equable pressure excited by the bandage causéd reduction after opiates, etc., etc., had failed of effect.

Dr. Brett had tapped both the sac and the knuckle of intestine with the needle of a hypodermic syringe, and had afterwards succeeded in effecting reduction. In one case after all other means had failed, he had inserted his finger nail under the constricting ring and, by either stretching, or slightly tearing some of its fibers, had returned the intestine.

Dr. Stansbury, of the Committee on Gynæcology read a paper on "Rest, the Great Essential to Complete Involution," taking the ground that the process of involution is governed by laws as fixed as are those which govern pregnancy, and that by enjoining absolute rest in bed for a time sufficiently prolonged to admit of the perfect accomplishment of involution, many troublesome cases of uterine disease following on parturition would be avoided.

Dr. Barnett, from the same committee, presented a paper on "Mechanical Gynæcology," claiming that the pessary has a much more extended field of usefulness than is generally admitted.

Dr. Wenzel, chairman of the Committee on Pathology, read a paper on "The Relation of Diphtheria and Erysipelas to Puerperal Fever," some of his conclusions being as follows: Puerperal fever bears the same relation to diseases of the puerperal period that hysteria bears to diseases of the nervous system in the female. Septic infection may cause puerperal trouble, but the germs of any disease cannot produce puerperal fever, pure and simple. Zymotic diseases affecting the puerperal woman may become virulent or malignant, but they retain their entity and are the same when under similar conditions in another patient, or in the same patient at a different time. Diphtheria is a grave constitutional disease which affects, principally, persons under 16 years of age: puerperal fever, so-called, is impossible before puberty, and the so-called diphtheritic patches accompanying puerperal diseases may be found also in other lesions in which all the other symptoms of diphtheria are absent. No direct diphtheritic infection has been observed to produce anything else than diphtheria, and if a parturient patient became infected, the disease was diphtheria, and not puerperal fever. Erysipelas may develope in the puerperal woman and prove rapidly fatal, without external manifestations. The diagnosis between erysipelas in such cases and puerperal fever is extremely difficult and often impossible during the life of the patient. That erysipelas has been followed by dangerous or fatal puerperal disease is affirmed, but the number of observations is yet too small to warrant positive conclusions, and that the puerperal woman has the power to change the entity of any disease into any other disease is extremely doubtful and requires proof.

A second paper on the same subject was read by Dr. Clark, also of the Committee on Pathology, who thought that as yet the origin of all three diseases—diphtheria, erysipelas and puerperal fever—is as yet uncertain. The parturient condition was one in which the system was badly able to resist effectually the attacks of disease in whatsoever form they might be made, and any of the putrefactive bacilli, which might find entrance into the system of the puerperal woman, would find there a fertile soil and abundant nutriment. The fact that the worst cases of puerperal fever occur within two or four days after labor, should be kept in mind, and since during that time the womb was in a condition best fitted for the absorption of poisonous matters of whatever kind, the utmost care should be taken to render the lochial discharge aseptic, by the use of carbolized gauze, antiseptic absorbent cotton, etc., during the whole of the week immediately following labor.

Dr. E. W. Bartlett presented a paper on "Color Blindness," and the dangers to the public arising therefrom. A resolution was adopted as a result of this paper, and the discussion following it, under which a special committee was appointed, the duty of which was declared to be the collection and dissemmination of information concerning color blindness, and the losses of life and property caused by it, the presentation of such information to the public generally, and the securing of and from Medical Societies and other bodies, which shall tend to obtaining proper legislation on the matter. Drs. Bartlett, Hoey and Brett were appointed a committee for the purpose.

Dr. Bartlett presented another paper in which he described a modified operation for cataract.

Dr. Catlin reported a case of post-mortem examination, where death was supposed to have occurred from bilious colic. The real cause, however, was discovered in an enlarged, ulcerated and ruptured gall bladder in which were impacted gall stones to the number of at least two hundred.

Dr. Manly made report of a case in which the astragalus had been removed to relieve disease following upon dislocation. The foot was a little inverted, but symmetrical in appearance. The wound had healed kindly. Dr. M. exhibited the bone which had been removed, and it was examined by many members with great interest.

Dr. Epley read a paper upon Ergot and its Therapeutic value, claiming that this drug was entitled to rank in usefulness with iron, opium and quinine. It has great power in arresting hacking, irritating coughs, particularly when a relaxed condition of the mucous-membrane exists in connection therewith, and has proven of marked value as an internal hæmostatic. Its most important power, however, lies in its ability to arrest promptly all acute local inflammations, especially in the respiratory organs, and where it will abort one pregnancy it will cut short ten pneumonias.

Drs. Manley, Meacher, Binnie and Bartlett were able to endorse several of the positions taken by Dr. Epley from the results of their own practice, and the general feeling in the discussion that followed the reading of the paper was favorable to the views of the writer.

The following resolution was adopted:

Resolved, That in consideration of the advances made as to a knowledge of the causes of consumption, and of the now known infectious character of the disease, we use all the means in our power to have the phthisical members of families as much as possible separated from the healthy members, and also that we recommend the State Board of Health to take means to have such persons separated from intimate association with the well in our public institutions.

The following officers were elected for the coming year. President—Dr. N. M. Dodson, of Berlin; Vice Presidents—Drs. E. W. Bartlett and G. W. Jenkins; Assistant Secretary—Dr. Wm. Thorndike. Censors—Drs. Mason, Senn and Thorndike. Dr. Reeve, of Appleton, is permanent Secretary.

Twenty-seven gentlemen were admitted to membership, and the Society adjourned to the first Tuesday in June, 1884, the session to be held in the city of Milwaukee.

A characteristic feature of the meeting, and one which made it one of the most profitable held by the Association, was the large amount of time given to discussion of the various topics suggested by the papers presented.

REPORT OF THE SECRETARY OF THE SECTION ON DISEASES OF CHILDREN.

FIRST DAY.

CLEVELAND, O., June 5, 1883.
COUNCIL CHAMBER, CITY HALL.

Section of Diseases of Children convened at 2:30 P. M.

The Chairman, Dr. Blount of Indiana, and the Secretary, Dr. Sears, of Texas, being absent, a te porary organization was effected by calling Dr. Charles Warrington Earle, of Chicago, to the Chair, and Dr. E. L. Boothby of Wisconsin to the Secretary's desk. None of the papers in regular programme being present, a volunteer paper was read by Dr. Earle on Cephalo Hematoma In the New Born. This subject was discussed by Drs. Reed of Cincinnati, Harris of Virginia, Lee of Baltimore and Boothby of Wisconsin.

On motion voted to refer the paper to the committee on publication.

No further business being brought up, the section adjourned till 2:30 P. M. of Wednesday.

SECOND DAY.

Section called to order at 2:30 P. M. by Dr. Earle, of Chicago. He introduced the regular chairman, Dr. Blount, of Indiana, who assumed the chair, and Dr. Boothby, of Wisconsin, was chosen Secretary for the balance of the meeting, in place of Dr. Sears, of Texas, who continued absent.

The paper on the Unity of Membranous Croup and Diphtheria, by Dr. Harris, of Virginia, was read, and a very interesting and earnest discussion ensued, participated in by Drs. Earle, of Chicago, Christie, of Iowa, Lee, of Baltimore, Sheehan of New York, Freeman, of Ohio, Boothby of Wisconsin, Ulrich, of Pennslvania, and many others. Voted to postpone further discussion on the subject until Thursday. This vote was reconsidered so far as to allow Dr. Harris the reader of the paper, to close the discussion for to-day, as he was obliged to leave, and could not be present at the next session of the Section. Dr. Harris' paper was referred to the Committee on Publication.

Dr. Alex. Y. P. Garnet, of the District of Columbia' read a paper on Epidemic Jaundice Among Children. The paper was discussed by Drs. Lee, of Pennsylvania, Harris, of Connecticut, and Lee, of Baltimore. The paper was then referred to the Publication Committee.

A volunteer paper on the Surgical Treatment of Purulent Pleuritic Effusions in Children, by Dr. W. H. Meyers, of Indiana, was read, discussed and referred to the Committee on Publication.

A second volunteer paper by Dr. C. W. Earle, of Chicago, on a Plea for Pleasant Medication and a more Thorough Study of Infantile Therapeutics.

This paper elicited considerable discussion, after which it was referred to the Committee on Publication.

Dr. Boothby, of Wisconsin, was excused from reading his paper on Croup and Diphtheria—their Unity or Duality, as the paper of Dr. Harris, of Virginia, covered the same ground, and embodied similar views.

The Section then adjourned until 2 P. M., Thursday.

THIRD DAY.

The Section was called to order by Chairman Dr. Blount, of Indiana, at 2:30 P. M. Minutes of yesterday's session read, corrected and then approved.

The first paper was read by Dr. Good, of Indiana,

on Dentition. Discussed by Goodman, of Illinois, Earle, of Chicago, Rud, of Ohio, Freeman, of Indiana, Boothby, of Wisconsin, et al. After discussion and reference to Committee on Publication, Dr. Casebeer, of Indiana, read an interesting paper on Pædiatric Medication. Discussed by Drs. Sennet, of Ohio, Ulrich, of Pennsylvania, Von Cline, of Ohio, and others. The paper was referred to the Committee on Publication.

Moved by Dr. Earle that Dr. Casebeer read a paper by title which he has not thoroughly prepared, the title of which is Pædiatric Therapeutics and its Relation to General Therapeutics; that he be asked to complete the same and forward to the Section for publication in the transactions, subject to the action of the Committee on Publication.

Dr. Norman Teal, of Indiana, read a volunteer paper on Infantile or Essential Paralysis. Discussion on the same by Dr. Meyers, of Indiana, Hyat, of Iowa, Ulrich, of Pennsylvania, Lee, of Baltimore, Snow, of Michigan. On motion, paper was referred to Committee on Publication.

As the papers on Diphtheria, by W. F. Sharrer, of Indiana; on Hereditary Syphilis, by G. W. Burton, of Indiana; on Cholera Infantum, by B. W. Ryan, of Indiana; Acute Inflammation ofthe Lungs in Children Under Six Years of Age, were not present, neither the authors of the same, the subject of Diphtheria, Its Varieties and Variations, was taken up and discussed by E. L. Boothby, of Wisconsin; by Dr. Reed, of Iowa; Dr. Sheehan, of New York; Dr. Ulrich, of Pennsylvania; Gallagher, of Pennsylvania; Lee, of Maryland, and Dr. Hyat, of Iowa.

Dr. Hyat having spoken his allotted time, it was extended, to enable him to finish.

The time having been consumed, further discussion was postponed.

The Section adjourned, after a session of five hours.

E. L. BOOTHBY,
Secretary pro tem.

DOMESTIC CORRESPONDENCE.

PHILADELPHIA LETTER.

(For THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.)

Our medical colleges and societies have again resumed their usual activity with the return of fall. On Monday, September 10, the University, the Medico Chirurgical, and the Jefferson began their preliminary course of lectures which will continue throughout the month. The faculty of Jefferson Medical College, in order to afford every facility for a higher medical education, have organized a post-graduate course. This course, which is now being perfected, will consist of five terms of seven weeks each, and will begin October 1. The physicians selected for that course, and the subjects taught by them respectively, are as follows:

Ophthalmology, Prof. Wm. Thompson; Otology. Drs. L. and Chas. Turnbull; Gynæcology, Drs. F. H. Getchell and J. Ewing Mears; Physical Diagnosis, Diseases of the Chest, Dr. J. C. Wilson; Orthopædic Surgery, Dr. O. H. Allis; Normal and Pathological Histology, Dr. Morris Longstreth; Diseases of Children, Dr. O. P. Rex; Nervous Diseases, Dr. J. T. Eskridge; Laryngology, Drs. Sajous and Jurist; Urinary Pathology, Dr. J. S. Neff; Medical Chemistry, Dr. G. M. Ward; Practical Pharmacy. Dr. S. M. McCollin; Experimental Physiology, Dr. A. P. Brubaker; Diseases of the Skin, Dr. J. V. Shoemaker; Botany, Materia Medica, and Experimental Therapeutics, Drs. A. K. Minich and A. R. Rinear.

At a stated meeting of the Obstetrical Society of Philadelphia, held in the hall of the society, 13th and Locust streets, the evening of Sept. 6th, Dr. Wm. T. Taylor reported a case of face presentation with eclampsia. The patient was a primipara, age 23, and, as she had been enjoying good health during her gestation, he had no reason to expect trouble. At 6:30 o'clock in the morning he was called to the labor; found the pains slow, the os slightly dilated, and was able to diagnose a face presentation with chin toward the sacrum. As the patient was quite restless he gave her a chloral mixture and left her and went home for breakfast. At 8.30 o'clock he was called hurriedly by the husband, who reported that his wife had had a fit, and while he was in the room soon after his arrival at the house of the patient, she had two convulsions in rapid succession. The face was red, the head drawn to one side, and the convulsions attended with all the usual symptoms of eclampsia. He immediately sent for some chloral and an injecting appartus, and injected a dram of chloral dissolved in four ounces of water into the rectum which controlled the convulsions. Examination now revealed the os dilated, the head high up, and the face presenting as before. An attempt was now made to rotate the head into a natural position with occiput anterior, and was successfully accomplished. The patient being restless, another injection of chloral—same strength as before—was administered. The head was then brought down the inferior strait, the labor left to nature, and soon a still-born child was born. There was no more eclampsia. The patient was now unconscious from the chloral, but finally awoke refreshed. Later in the afternoon, however, she was somewhat restless, but the next morning her condition was good in every way except a slight abdominal tenderness. No further trouble was experienced. Dr. Taylor particularly referred, in this connection, to the virtue of chloral in controlling puerperel convulsions of a nervous character.

In discussing this report, Dr. Albert H. Smith suggested that the discussion be particularly directed to the subjects of the management of face presentation and convulsions. He considered Dr. Taylor fortunate in being able to restore the position in the case reported from a presentation of chin posterior to that of the occiput anterior position, and retaining it thus during the application of the forceps. This he had found in his experience a very difficult thing to do. He thinks there is something very mysterious in the ætiology of face presentation. Though not difficult to understand why the face comes down, secondarily, from a gush of water in partial flexions for

example, or in marked lateral obliquitus of the uterus the cause of primary face presentation is involved in mystery. In the majority of cases of face presentation with chin posterior, it is difficult to force down the occiput and fix it there long enough to deliver, or while forceps are applied. In fact, in only two cases did he succeed in doing it. He thinks that there are no cases where medlesome midwifery is to be condemned more than in the management of face presentations, and his experience has been that in most cases nature is able to effect a delivery without manual interference. Nature is very slow in her process of extension, descent, rotations and flexions in cases of this kind, and caution should be used not to force the chin down too rapidly, but to imitate nature by being slow in the operation. The urgent reason for interfering at all is in case of failure of the child's pulse, in which case it becomes often necessary to take the risk, or from some alarming condition of the mother. But if the pulse is good and everything favorable, it is always better to leave the case to nature, especially if the chin is anterior. It used to be taught that the child could not be born with chin presenting and posteriorly, but now it is known that this is altogether possible, as nature in a large portion of cases will rotate the chin upon the lateral pelvic wall to an anterior position, and the birth is then altogether natural.

Dr. Taylor replied that in his case the child was well up above the superior strait, and the child was small, and dead before delivery.

Dr. B. F. Baer asked whether it would not be better in cases of face presentations with chin posterior, and the child above the superior strait, to perform version by the feet rather than to wait for nature to accomplish the delivery, and run the risk of having the child forced into a position where birth was impossible.

To this Dr. Smith replied that he did not mean to have Dr. Taylor think that he spoke in criticism of his procedure in the case reported, for he considered it perfectly right and proper under the circumstances. Neither did he say that manual interference should never be practiced after failure with its effort to restore the head in flexion, as the waters will then be discharged from around the child, the head partially engaged in the brim, and the uterus firmly contracted, being stimulated by the pressure and movement of the hand in the unsuccessful manipulation.

The danger to the child is greater, also, in erosion under these circumstances, on account of the necessity of either bringing it down in the stage of evolution as a posterior position of the dorsum, or, to avoid that, of rotating it upon its own axis, either of which, in a case already prolonged and complicated, would be a serious procedure.

But as a general rule he was entirely opposed to version, as being fraught with danger to both the mother and the child, and it should only be performed in clearly defined cases. There is danger of rupturing the uterus when it is firmly contracted down upon the child, in any attempt to turn it. Nature will usually rotate the chin anteriorly, or it may be accomplished with very little aid from the hand of the accoucheur.

Dr. J. J. Allen fully coincided with the views expressed by Dr. Smith, and went further than that in his own opinion. He thinks we ought not to perform version in any case merely to save the child, and only for the sake of saving the life of the mother does he consider the proceeding justifiable.

Dr. R. P. Harris said that he thinks Dr. Smith's position represents the one now quite generally adopted by obstetricians, and referred to his remarks upon the subject in Playfair's work.

Dr. Allen rose to explain that by version he means a complete turning of the poles of the child, and he does not include under that term partial turnings to obtain better positions, which often may be practiced with advantage.

Dr. Baer said that version by the feet was generally taught in the Philadelphia schools and by all authors, including Playfair, and that when the uterus is not contracted it seemed the most rational procedure. He criticised Dr. Smith as taking the position that a mento-posterior position is a natural labor, when in fact it is a most difficult labor, and may become impossible if let alone. He said that face presentations are said to be caused in some cases by the death struggles of the child, and suggested this as a possible explanation of the position found by Dr. Taylor in the case just reported. Dr. Taylor replied that the diagnosis was made out prior to the child's death, which did not happen, in his opinion, until his second visit, at which time, during an examination, he felt a sudden tremor of the child, and then pronounced it dead.

Dr. Smith replied to Dr. Baer's criticism, to the effect that he did not mean to say a face presentation, with chin posterior, was an *easy* natural labor, but, nevertheless, could be completed naturally in a majority of cases of multiparous women. He did not think he was prepared to go as far as Dr. Allen, but believes there are conditions where version should be performed to save the child.

HÆMOPHILIA. NOTES FROM PRACTICE; BY S. HARVEY LAMBERT, M. D., ASSUMPTION, ILL.

Mrs. R. K., aged 63, enjoyed general good health until she was 44 years old, when her menses became irregular and painful, for five years, and then ceased. Her health slowly returned, and remained good for about four years, when she was attacked with gastralgia, the pain recurring once a month for near a year, and, after six months rest, returned with renewed vigor.

About this time she noticed a small lump in her right breast just above the nipple, which, at times, would pain her at night.

July 20, 1882, Mrs. K. came under my observation, and said for the past six or seven years, she had had neuralgia of the stomach, and a tumor in her right breast. The neuralgia occurs irregularly, from twice a week to once a month, and, evidently, was due to chronic malarial poisoning.

The breast contains a firm, roundish, nodulated tumor, about the size of a hen's egg. The axillary glands are enlarged. She thinks the tumor has not

enlarged during the past five years, but states the glands in the axilla began to "grow" about two years ago.

On September 23, 1882, having missed her so-called neuralgia, she decided to suspend further treatment.

I now lost sight of her until April 16, 1883 (seven months) when I was called, and found she had been bleeding from the nose for about ten hours, and had lost one and a half pints of blood. By the 20th she was quite well; on the 25th she again lost near a quart of blood from the nose; on the 30th she had a severe hæmorrhage from the gums; May 6 she lost over a pint from the nose; same amount on the 9th; the 20th she vomited fully half a pint. From May 30 to August 21 she had six hæmorrhages from the nose, and lost from four ounces to one pint of blood each time.

August 29, at 4 o'clock, A. M., was called in haste and found her in a fearful tetanic spasm; August 30, very nervous and weak. September 2 she again lost one pint of blood. All along, there has been no evidence of cardiac disease, until to-day we have an anæmic murmur; liver and spleen somewhat enlarged; cachexia and emaciation marked.

These hæmorrhages are preceded by pain in her cancer, and a determination of blood to the head.

Notwithstanding, blood was once vomited, tenderness was not detected in her epigastrium, and, I think, must have been swallowed.

During the months of June, July and August, extreme prostration prevailed, with localized neuralgic pains over entire body. Temperature has fluctuated between 98° and 102° F. At this writing she is much stronger, and quite free from pain. Appetite fair; bowels rather costive.

I have carefully investigated her family history, and find it good. She states her parents died of old age, and were free from hereditary tendency to phthisis, cancer or bleeding.

She has two brothers living, and in good health, except each of them has a tumor, and has been advised by Dr. Penwell, of Shelbyville, Ill., to have no surgical interference. She has two sisters dead; one died from milk-sickness, the other from childbirth. Herself, was never pregnant.

As yet I have no comments, except to intimate that I firmly believe, where we have even a remote tendency to skin disease, or malignancy, continued malarial poisoning is likely to bring it out.

The treatment has been anti-malarial, tonic and astringent. Strict attention given to hygiene and general nutrition.

As ergot would promptly vomit her, I began the use of "Kennedy's Aqueous Extract of Pinus Canadensis," and find it has a positive effect in contracting dilated vessels and toning up the relaxed bowels.

Now, any suggestions of real merit the profession may favor me with will be thankfully received, and and due credit given in a report of progress and termination of the case.

The following letter, though written for the *Daily Springfield Register*, so fully expresses the views and expectations of a large proportion of the sanitarians of the present day, that we give it a permanent record.—[ED.]

MY DEAR SIR: I am this evening in receipt of your circular of inquiry, forwarded to me from Chicago, and in which you ask a brief statement of my views "as to the probability that this country will suffer from the threatened epidemic" of Asiatic cholera, and as to the precautions which should be adopted, etc.

I am reconciled to the fact that my "views" concerning such a probability are worth no more than, if so much as, those of the editor of a metropolitan newspaper, with his facilitics for judging of probabilities, by the other fact that epidemics are by no means unmixed evils. It was a recurrence of cholera epidemics which directly led to the first attempt at sewers in Chicago, and to the present system of water supply. It was the recurrence of yellow fever epidemics in Memphis which led to the sanitary regeneration of that city. It was the recurrence of epidemics of both diseases which resulted in the magnificent sanitary work, educational and practical, of the New Orleans Auxiliary Sanitary Association.

The salutary spur of an occasional epidemic outbreak seems to be necessary in order to secure any decent amount of attention to the care of the public health, at least while the sanitary schoolmaster is so much abroad as at present. In any prolonged exemption from such visitations, communities become lax, and gradually grow to tolerate conditions which result, directly or indirectly, in an enormously greater aggregate of mortality than that caused by any epidemic.

For example: The class of diseases to which Asiatic cholera belongs, and which are all more or less preventable, caused 5,136 deaths in an aggregate mortality of 13,234 in Chicago last year. In 1881 it caused 5,985 deaths out of a total of 14,101. This is an average of 40 per cent. of the total mortality. The last epidemic of cholera (1873) caused only 3,825 deaths in the whole country—nineteen States being invaded. There had been no epidemic cholera in the United States for six years previous, since 1866; but during those six years not less than 125,000 persons had been carried off by the group of diseases most closely resembling it.

The moral of these figures seems to me no less obvious than that of the tables in the report of the Health Department, recently issued. Take from this report the table of zymotic mortality by wards, and compute the ratio of this mortality to population. The result will furnish a very accurate index of the sanitary status of each ward. When the zymotic mortality is greatest there will be found the most overcrowding, the greatest amount of personal uncleanliness, the greatest want of sewerage, the most neglected scavenging, the most abundant and various filth, both surface and subterranean. Epidemic cholera might temporarily increase the death rate under these conditions, but the average mortality for a series of years would not be materially affected.

Enough, however, in this strain. I suppose there is no prosing nor prophecy so insupportably dreary

as that of the sanitary Cassandra. By way of amends let me offer the following series of propositions concerning Asiatic cholera, formulated in a report which I drew up in 1875 at the request of Surgeon-General John M. Woodworth, of the Marine hospital service, and under whose name it was published in the volume entitled "The Cholera Epidemic of 1873 in the United States."—(Ex. Doc. No. 95, H. R. XLIIId Congress, 2d session.) These propositions are based upon a vast mass of cumulative evidence collected by cholera students in both hemispheres, and were originally intended to bear solely upon the question of the exclusion of the disease from this country. They will be found, however, equally applicable to methods of stamping out the disease should it effect foothold, and to the personal protection of the individual:

I. Malignant cholera is caused by the access of a specific organic poison to the alimentary canal, which poison is developed spontaneously only in certain parts of India (Hindostan).

II. This poison is contained primarily, so fas as the world outside of Hindostan is concerned, in the vomit, stools, and urine of a person already affected with the disease.

III. To set up anew the action of the poison a certain period of incubation with the presence of alkaline moisture is required, which period is completed within one to three days; a temperature favoring decomposition, and moisture or fluid of decided alkaline reaction, hastening the process, the reverse retarding.

IV. Favorable conditions for the growth of the poison are found (1) in ordinary potable water containing nitrogenous organic impurities, alkaline carbonates, etc.; (2) in decomposing animal and vegetable matter possessing an alkaline reaction; (3) in the alkaline contents of the intestinal portion of the alimentary canal.

V. The period of morbific activity of the poison —which lasts, under favorable conditions, about three days for a given crop—is characterized by the presence of bacteria, which appear at the end of the period of incubation, and disappear at the end of the period of morbific activity. That is to say, a cholera ejection, or material containing such, is harmless, both before the appearance and after the disappearance of bacteria, but is actively poisonous during their presence.

VI. The morbific properties of the poison may be preserved in posse for an indefinite period in cholera ejections dried during the period of incubation, or of infection matter dried during the period of activity.

VII. The dried particles of cholera poison may be carried (in clothing, bedding, etc.) to any distance, and when liberated may find their way direct to the alimentary canal through the medium of the air—by entering the nose and mouth and being swallowed with the saliva—or, less directly, through the medium of water or food in which they have lodged.

VIII. The poison is destroyed naturally either by the process of growth or by contact with acids; (1) those contained in water or soil; (2) acid gases in the atmosphere; (3) the acid secretion of the stomach.

IX. It may be destroyed artificially (1) by treating the cholera ejections, or material containing them, with acids; (2) by such acid (gaseous) treatment of contaminated atmosphere; (3) by establishing an acid diathesis of the system in one who has received the poison.

For the non-professional reader the pith of these propositions is contained in the last two—the eighth and ninth. Nothing has since come under my observation to change the conviction arrived at, when these propositions were framed, namely: That the mineral acids may be relied upon as a certain means of preventing the spread of Asiatic cholera.

FRANK W. REILLY, M.D.

Springfield, Ill., Sept. 12.

NITRO-GLYCERINE AND DYNAMITE.

WASHINGTON, D. C., Sept. 12, 1883.

Dear Dr. Davis: Having seen in a recent number of the JOURNAL an article concerning the toxic properties of dynamite and nitro-glycerine, it occurred to me that it might be well to say that nitro-glycerine is one of the most dangerous poisons known. A single drop on the tongue of a cow will kill her instantly, and the poisonous property of this explosive, when applied to the surface of the body, is well known to those operatives engaged in its manufacture.

Now, dynamite is simply nitro-glycerine spread out upon the surface of the particles of an infusorial earth (*Kieselguhr*), which, by reason of its cup-shaped surfaces, allows a greater portion of the nitro-glycerine to be spread upon it, in proportion to its bulk, than any other substance at present known. It is thus seen that the nitro-glycerine is simply diluted when made into dynamite, and the latter still retains the toxic property of the original nitro-glycerine.

It therefore behooves those who desire to try the effect of dynamite upon their cases of cerebral anæmia to be sure that it is very dilute when administered, and very fresh, for nitro-glycerine is one of the most unstable compounds. Theoretically, it seems that small, continuous, and very dilute doses of dynamite ought to be a specific in cases of cerebral anæmia.

JOHN B. HAMILTON,

DOUBLE DISLOCATION OF THE HIP.

N. S. DAVIS, M.D., L.L.D., EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

My Dear Sir:—In the weekly number of this journal, date of August 25, appears an article headed "Simultaneous Traumatic Dislocation of Both Hip Joints," by J. H. Packard, M.D. After reviewing the literature on this rare subject, he claims to have detailed all of the cases accessible. Permit me to invite attention to a case reported in the "Transactions, of the Pennsylvania State Medical Society," page 405, volume XXX—double dislocation, with fracture of the ascetabulum of the right side. While the accident most happily is rare, it is well to tabu-

late the cases that are reported, in order to permit the most favorable deductions to be made in favor of such treatment that secures the best results.

Very respectfully,
D. W. BLAND.

POTTSVILLE, PA., Sept. 15, 1883.

LATE RESUSCITATION IN APNŒA NEONATORUM.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

I desire to collect information and statistics on the resuscitation of the asphyxiated new-born where prolonged efforts at restoration have met with success. The history of any such cases, with comments or opinions, from readers of this journal, will be thankfully received and acknowledged.

ELMER GLOVER, M.D.

Terre Haute, Ind.

CORRECTION.

N. S. DAVIS, M.D., LL.D., EDITOR,

My Dear Sir: Please make the following corrections in my eye article in JOURNAL AMERICAN MEDICAL ASSOCIATION, No. —, Sept. 8, 1883:

Page 258, second column, third line from bottom of page, read $\frac{20}{100}$; page 258, fourth line, read $\frac{13}{100}$ and $\frac{50}{100}$; in second column, same page, eleventh line, read $\frac{50}{100}$.

H. CULBERTSON, M.D.,
Zanesville, Ohio.

NECROLOGICAL.

HOPPER, H. A., M.D., the son of a prominent physician of Bergen county, N. J., was born August 8, 1824; died at his residence in Hackensack July 8, 1882. He was graduated from the College of Physicians and Surgeons, New York City, in 1847, and soon after settled in Hackensack, N. J. His family position, courtesy of manner, active devotion to professional duty, and great skill, soon commanded a lucrative practice extending over a large section of country. He was the president and an active member of the Bergen County Medical Society, and would probably have been appointed president of the State Medical Society had he lived until its next annual meeting. As president of the New Jersey Sanitary Association he delivered a valuable address a year before his death. Many valuable contributions were made by him to this Association, and to the State and County Societies. He was president of the local Board of Health, and was active in promoting the public welfare. His hearty interest in all that concerned the medical profession, his kindness of heart, and zeal with knowledge, combined to make him popular. He was a man of large experience, decisive in counsel, and in action could always be relied upon as a man clear convictions and of judgment. An outspoken Christian life adorned his professional character, and, while devotion to his profession was untiring, he was always prominently interested in all good works. Although an occasional sufferer from attacks of inflammatory rheumatism, no serious internal lesion manifested itself until a few months previous to his death. Young in feeling and vivacious always, he seemed still among the juniors, and worked at every new department with the interest of a student. His decease is mourned by an entire community and by the whole profession of the State.

E. H. M.

Forwarded by Dr. B. A. Watson.

WAKEFIELD, HORACE POOL, M.D., of Leicester, Mass., was born in Reading, Mass., January 4, 1809; died at his residence in Leicester August 30, 1883. He was the son of Deacon Caleb and Matilda (Pool) Wakefield. The Wakefields were of Welsh origin, and the Pools English, and among the first settlers of Reading. He prepared for college at Bradford, Mass., and at Pinkerton Academy, Derry, N. H., and graduated in letters at Amherst College, and in medicine at Dartmouth in 1836. He began practice at Oakham, Mass., and met with good support, but in 1844 was induced to remove to Reading, and continued to practice until 1866. He had served in the Legislature while a resident of Oakham. In Reading he served as Town Clerk in 1857 and 1858, and was also a member of the School Committee, President of the South Reading Insurance Company, and of South Reading, Reading and Stoneham Gas Company. Dr. Wakefield was State Senator in 1862 and 1863. He was at one time President of Savings Bank and Director of the Palmer National Bank. In 1879 he purchased the "Stonewall farm," in Leicester, and removed to it, where he remained to the time of his demise. He was a member of the Massachusetts Medical Society, and one of the councillors and one of the former vice-Presidents; President of the Middlesex East District Medical Society, before which he delivered the annual address in 1867. Also a member of the American Medical Association since 1858. In 1838 Dr. Wakefield was married to Abigail Pratt, of Reading, who died in 1850. A few years after this he married Mary B. Cristy, of Johnson, Vt., who, with one daughter, survives him.

J. M. T.

LAWTON, SANFORD, M.D., born at Monson, Mass., October 16, 1832; died suddenly of disease of the heart while visiting friends at Scranton, Pa., July 23, 1882.

Having acquired a good preparatory education, he studied medicine, and, attending lectures, graduated M.D. at Yale Colledge in 1852. He began practice at Pittston, Pa., where he labored successfully for fifteen years. In 1870, for the purpose of better facilities for educating his children, and secure greater comforts for his aged parents and an invalid sister, he removed to Springfield. Here he acquired a remunerative practice. He was for three years president of the Hampden District Medical Society. He was also for some years a member of the School Committee, and held other offices of honor and trust.

From data furnished by Dr. H. O. Marcy.

J. M. T.

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ORIGINAL ARTICLES.

A STUDY OF THE COINCIDENCE OF SYPHILITIC AND NON-SYPHILTIC AFFECTIONS OF THE SKIN.

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There are certain vulgar prejudices relative to the physical condition of the subject of syphilis, whose influence is not without effect in the minds of many physicians. The difficulty, indeed, which even the most expert must at times encounter, in determining the exact nature of certain definitely evolved skin symptoms in such cases, needs no comment. It is a difficulty only too readily evaded by establishing a diagnosis of syphilis, and there abandoning all further ætiological question. The popular and pseudo-scientific reasoning upon this point, traverses the entire field of clinical medicine. It is sufficiently common to read that the reporter of this or that history, suspecting that there was "a syphilitic element in the case," did thus and so. The idea is prevalent that a mischievous, anomalous, capricious or remarkable change of symptoms, is due to the influence of a single one operating coincidently with several disease-factors; and that this species of pathological Puck is syphilis. It has been urged that syphilis, though possessing sufficiently well accentuated features at some periods, becomes at others so commingled with other diseases as to lose in part its characteristic physiognomy, especially after a suppositious descent to several generations. In this way, an explanation has been sought for the existence of struma, tuberculosis, rickets, leprosy, and many other disorders of the human system. Not a few diseases of the skin have been thus hastily and unreasonably regarded in an improper relation, as, for example, psoriasis, lupus vulgaris, and some of the forms of acne.

It is somewhat curious that the same species of reasoning has not pushed to an equal extreme in the case of other disorders of a greater or less gravity. The intestinal parasites, for example, when discovered in the person of patients affected with chronic disorders, are not generally attributed to the latter ailments. The subjects of pulmonary phthisis are also at times sufferers from other disorders not explained by a tuberculous development. The diarrhœa of the asthmatic, and the sciatica of the man affected with nasal catarrh, are not commonly referred to the same causes.

The more precise, exact, and painstaking the study of the symptoms in syphilis, the more clearly will be recognized two facts, which, though at first view involving an apparent variance, are yet strictly related. The first is, that syphilis much more resembles other diseases in its career and its subjection to accidental influences, than has been commonly supposed and taught; second, that when, preceding, co-existing with, or following other pathological conditions, its unity is preserved, and it rarely undergoes itself, or induces in other diseases such a modification as distinctly changes the type of the resulting symptoms.

The first of these facts is of rather less practical importance than the second, and is, moreover, one that requires for its acceptance a surrender of fewer popular opinions. It is therefore, in this connection, merely supported by the enunciation of the following propositions. The second fact will require clinical demonstration.

(*a.*) Allowance being made for a wide field of distribution of its lesions and a certain capriciousness in the mode of their evolution, a study of one hundred consecutive cases of syphilis will convince the unprejudiced observer that such cases resemble each other as closely as do a similar number of consecutive cases of pneumonia, typhoid fever, or chronic interstitial nephritis.

(*b.*) Syphilis is no exception to the general rule, that the patient of greatest vigor best endures its penalties. Herein is the key to an enormous number of the problems, presented in its wide limits of manifestation. It is far more a question of weight, of nutrition, of muscular vigor, of the function of the chylopoetic viscera, than of mercury or other drugs to be employed in its treatment. It is far more important to enquire, in every case, what is the condition of the blood-making process, than, what is the condition of the blood, as regards infection or non-infection. The French School of syphilographers, for example, have well nigh vainly perplexed themselves in the effort to diagnosticate the character of a threatened syphilis from the features presented by its initial sclerosis, but in settling such a prognosis, it is of greater value to determine how many pounds of animal food the patient can properly assimilate in a given period of time, than to know how large is his neoplasm, or how deep his ulcer.

(*c.*) Syphilis acknowledges subjection to the great accidents, which commonly and evidently work changes in all the disease-processes of man. Thus, chronic alcoholism, malaria, temperature changes sufficiently severe to prolong or agravate disease, and

a long list of other agencies, operate with similar effect upon an equally long category of maladies. He who gets a pneumonia, after lying drunk in the gutter on a severe night in winter, has, after all, but a severe pneumonia. And, similarly, the syphilis of the old man, broken down with the debaucheries of a half century, we may, with the French describe as "galloping." But this is merely a rapid evolution of grave symptoms which in no other respect differ from those of common observation.

(*d.*) Syphilis, like other diseases, may lurk obscurely in the system, but everything said and done, it must be betrayed by syphilitic symptoms, or we cannot admit its existence. Not every man who is losing flesh has become tuberculous. Every pallid wife with a dissolute husband, has not undergone infection. Kassowitz has well emphasized this point in his protest against the assumption that every abortion of even the syphilitic woman is not necessarily due to syphilis, nor the product of conception of necessity infected.

(*e.*) Vulger belief to the contrary, notwithstanding, cases of syphilis, like those of other diseases, are readily separable into three well-known groups:— First, the mild, benignant or self-limiting, requiring no treatment. Second, the grave, malignant, where treatment can have little or no effect. Third, those falling between these two extremes, where judicious treatment is capable of turning the scale in one direction, and injudicious treatment in the other.

(*f.*) Lastly, there is no specific treatment applicable to every case of syphilis, which can be safely employed to the exclusion of all others. This is almost an axiom in general medicine. He who treats rheumatism with remedies addressed solely to the supposed rheumatic diathesis, and he who treats pulmonary phthisis with medicaments solely directed to the lungs, will commit the blunder of him who relies exclusively upon so-called specific medication in the treatment of syphilis.

This much premised, it is proposed in what follows to inquire how far clinical evidence supports the second of the two propositions set forth above, that, viz., which recognizes the unity of syphilis displayed in fairly typical symptoms in the subjects who are affected with other diseases, more particularly those involving the skin.

The few diseases to which reference is made in this connection, are considered in the order of the classification adopted by this Association.

In the first group, which includes the disorders of secretion, the varieties of seborrhœa and comedo are probably found in more frequent co-existence with syphilis than the other disorders included in the same class. It is usually in these cases the disorders of the sebaceous glands which precede, and the syphilis which follows. In studying, however, the inter-dependence of the two diseases, the seborrhœic complications of several of the syphilodermata should have no significance. But the occurrence of syphilis in young and middle-aged subjects, affected both with seborrhœa sicca of the vertex of the scalp and comedones of the face, is by no means rare, either in dispensary or private practice. It is scarcely necessary to remark that syphilis may in these cases accomplish its usual career without appreciably affecting these disorders, either in the one direction or the other. It does not appear that the manifestations of the latter disease in any way modify those of the others; nor is the seat of the one which precedes, the site by preference of that which follows.

The hyperæmic disorders of Class II. occur frequently as intercurrent accidents in the subjects of syphilis. The fact that they do thus occur, and are then presented in typical and unmodified forms, is established by common experience. Erythema intertrigo of the scroto-femoral angle in syphilitic male subjects, often due to the inunction of mercurial and other irritating unguents in this region, accomplishes its transitory career for the many, and vanishes without the appearance of a syphiloderm. The same may be said of a number of the exudative disorders included in Class III. Last winter I exhibited at the skin and venereal clinic in Chicago a lad nineteen years of age, who had an extra-genital chancre of the thumb, and who displayed a typical lenticular papular syphiloderm on the forehead, trunk, and extremities. His belly, however, was covered with equally typical urticarial wheals, produced by causes to which reference will be made later. These urticarial nodules differed in all particulars from the papular syphiloderm displayed in other regions of the body.

Among other diseases in this group may be named eczema, herpes facialis and progenitalis, the several forms of the acne, including acne artificialis, acne rosacea, impetigo, ecthyma, furunculus, anthrax, and the varieties of dermatitis which are frequently encountered with a typical development in the subjects of an active syphilis. It is difficult to recognize in the symptoms of these several disorders any difference which can be ascribed to the influence of a co-existing syphilis. The most common, certainly, of these coincidences are the furuncular and acneiform lesions, induced by the ingestion of the iodine compounds administered for the relief of the syphilis. These can be seen both immediately preceding, co-existing with and following the evolution of a generalized syphilitic exanthem. They usually disappear promptly after the withdrawal of the exciting cause, and are rarely, if ever, transformed into syphilodermata. Persistent and disfiguring acne rosacea occurring in the middle and later life of an ancient syphilis, is perhaps more often mistaken and mistreated for a late syphiloderm than any other cutaneous disease.

Herpes zoster I have never seen in a syphilitic subject. It is, however, a disease which occurs commonly but once in a lifetime; and for that reason it may be interesting to note that during the past year I have treated an ex-officer of the army for syphilis following nine months after a severe and typical left zoster frontalis, whieh also had been under my charge. The patient had calvities of nearly the entire vertex. He exhibited palmar and plantar syphilodermata succeeding a generalized rash, which never spared the region still distinctly displaying the typical, but fading cicatrices of shingles.

It is, however, to the subject of the coincidence

of psoriasis and syphilis, to which in this connection it is desired to direct special attention, as illustrated by the following cases:

W. N., male, then aged twenty-one years, unmarried, and by occupation an engineer, first consulted me in the fall of 1875 for a disease of the skin, which he said had then lasted for six months. Prior to that time he had suffered from no disease of greater consequence than a short-lived blennorrhagia, which had disappeared without appreciable sequelæ. He was then of medium height, of light weight for his years, beardless, and a decided blonde in the color of his eyes, skin, and somewhat sparse hair. He denied the fact of previous syphilitic infection in his case, a denial fully substantiated by his subsequent history. He had been for a brief time in the care of a reputable physician of Chicago, who had referred him to me for treatment.

When examined, he was found to be the subject of a typically developed psoriasis of indolent aspect. The regions invaded were the scalp and forehead sparsely; the trunk, back and belly rather abundantly; and the extensor aspect of the extremities. The hands and feet were spared, as was also the face, with the exception of the forehead. The eruption was developed in typical punctate, guttate, and nummular, sharply-defined lesions, covered with lusterless and imbricated scales, beneath which, after their removal, showed a reddened and glazed, or, when eroded, a bleeding surface. There was no pustulation nor fluid discharge of any kind from the surface. The hairs on the vertex were somewhat pasted to the scalp. The subjective sensations were insignificant. The eruption, in fact, so clearly accorded with the symptoms of the disease recognized in its more common manifestations, that it requires in this connection no further detailed description.

The disease did not at this date suggest by any feature that it would prove as obstinate and inveterate as subsequent events demonstrated. It may be here added that this result was probably largely due, first to a decided lack of constitutional vigor on the part of the patient; and, second, to the nature of his occupation, which required his spending a large part of each working day in fatiguing exertion in the relatively high temperature of an engine room.

This at least is certain, that from the date given above to the fall of 1881, a period of six years, this patient was never for any length of time absolutely free from all symptoms of his cutaneous disorder. I was sufficiently fortunate to retain his confidence throughout the entire period, lasting from my first observation of his case to the present. During this time he has been exclusively under my charge, and repeatedly under my observation at short intervals.

His history during what may be termed the purely psoriasic stadium of his case, may be described in a few words. The disorder exhibited itself in a series of alternate periods of activity and repose, varying naturally in point of duration and severity. During the six years not more than four really severe exacerbations occurred, and in but one of these was it really necessary for him to abandon his daily toil. Throughout the whole the efflorescence was similar in its general features as to the parts of the surface invaded, the color and contour of the patches, and the character of the imbricated scales. The chief difference was exhibited in the size of the disks. In the most severe of the really aggravated expressions of the disease to which reference has been made (that, viz., in which he was so disabled as to be compelled to abandon for a time his daily labor), the eruption became extensively diffused. But very few islets of sound skin were then left visible on the trunk, and the hands and feet were almost the sole parts of the extremities which remained uninvaded. At this time the inflammation of the skin reached a very high grade. At any one given moment of observation but very few scales could be detected on the surface, though the clothing of the person exhibited them in profuse quantity. The scales, indeed, were so rapidly formed, and after formation sustained so slender a relation to the deeper parts of the epidermis, that the slightest friction by the clothing, the hands, or the medicaments employed topically for the purpose of relieving the distress, swept them at once from their bed. The skin thus exposed was tumid, deep purplish-red in color, and its surface had a glazed appearance, as though covered with a varnish of dull hue. The elevation of the involved above the unaffected integument, as measured at the defined margin of the one rising above the other in a few unaffected islets, did not exceed one millimeter. The entire surface of the chest, back, belly, and thighs presented thus a single sheet of angry, swollen, and deeply reddened skin, with occasional heaps of sparse scales left adherent at a few points. The surface thus involved was distinctly dry. A linen handkerchief passed over any part of it could not be made to absorb a drop of fluid.

The picture presented at this date by the patient, was so different from that of a typically evolved psoriasis diffusa that one studying for the first time the symptoms of this stage, might have been unwilling to accept a diagnosis of psoriasis. There was here, indeed, a close correspondence with the condition described by Tilbury Fox, of London, in 1875, as pityriasis rubra. That it was, however, a true psoriasis of exaggerated type, was demonstrated clearly by the fact that it had not only begun by a display of the strictly classical symptoms of the last named disease, but also in its involution (which did not fail to be declared in the course of a few weeks), distinctly reverted to the same type. The giant patches of diffuse involvement broke up into palm-sized and nummular disks of defined outline and clearing center, often with a slightly raised border and covered with scales of firmer adherence and nacreous hue.

This was the first exaggeration of the disease that occurred after the date when the patient first came under my observation, and though this has been followed by a few others, none of the latter have begun to equal the severity of the first. In these less grave accesses, the back, belly, scalp, forehead and extensor aspects of the thighs would become covered with egg- to palm-sized, deeply reddened scale-covered disks, set together so thickly that it might be roughly esti-

mated that about one-half of the skin in these regions was involved. There would be two or three conspicuously defined egg-sized patches on the forehead, a few on the scalp, scarcely any on the face. The hands and feet were at no time involved. After fully completed involution, the skin of the patient would be left in a pigmented condition, with perhaps a very few patches on the sacrum, lumbar region and elbows.

Numerous internal and external remedies were from the first employed in the treatment of this patient, some proving quite effective, some valueless; none with the result of preventing the tendency of the disease to recur. To what extent the mitigation of the malady in its successive periods of activity may have been due to the medication employed, it is difficult to determine. Arsenic was given both in the form of Fowler's solution and Asiatic pills, for long periods of time in maximum doses. When pushed, there was eventually produced, as a rule, a decided amelioration of the general condition of the skin. Iron, phosphorus, copaiba, and the alkalies (the latter for experimental purposes) were also at times employed. Locally, sapo viridis, the tarry compounds, chrysarobin, pyrogallic acid, naphthol, with other substances esteemed useful in the local treatment of the disease, including Turkish and Russian baths, were all at times employed. As with the substances used internally, some seemed for a time of value, some were undoubtedly worthless; none, as has been seen, were capable of completely relieving the skin. The same may be said of a method pursued for a short time in this case, namely, the wearing of under-clothing made of impermeable material for a part of each day.

In the year 1879, this patient contracted a second clap, during one of the intervals between his accesses of psoriasis. It proved sufficiently manageable, but was followed by a stricture of the membranous urethra, which, when it was first discovered, barely admitted a sound of the size of No. 10 of the French scale. This coarctation was rapidly dilated to No. 34, when the resulting gleet and dysuria disappeared. It is occasionally necessary for the patient at this time to distend his urethra with a full-sized steel sound.

The uniformity long displayed in the skin symptoms of this patient (and set forth with some detail in these pages, in order that its definite features might be clearly recognized), was not interrupted till the winter of 1882. The patient was then in rather better than average health, and his skin was fairly clean. On the 7th of February of the year named, he exposed himself sexually, with a woman of the town, and first noticed that he had some disease of the privates, on the 7th of the following month, the lesion having thus accomplished an incubative period of 28 days. It may be regarded as probable that the exact incubative period was somewhat shorter than this, since the frequent invasion of the skin of the foreskin by patches of psoriasis, would naturally render the patient rather less observant of any special changes occurring in this portion of his body.

When examined, a pea-sized nodule was recognized on the lower limb of the prepuce, with a slight superficial erosion, and accompanied by induration and tumefaction of the lymphatic glands in each groin. His sore was at once pronounced to be an infecting chancre. He was given a vinous lotion, and told to bathe the part with this, and to carefully protect it from external irritants by the aid of a pledget of borated cotton. No other treatment was ordered, either internally or externally, and none was, as a matter of fact, employed, the patient having by this time learned to follow orders implicitly.

During the ensuing three weeks the sore healed, leaving an indurated button in its site. The patient was stripped and carefully examined by me every three or four days. On the fiftieth day, after the appearance of his chancre, it could be readily determined that there was post-cervical adenopathy. For the few days preceding, he had been suffering from malaise, substernal pains, and a decided feeling of languor. The skin of the trunk was then rather deeply stained as the result of thorough applications, made some months before, of chrysarobin, but was nevertheless carefully watched for the occurrence of a new exanthem. None, however, could be thus detected. He presented the usual so-called "billious"[2] appearance of the face, with increasing tumidity and tenderness of the cervical and post-occipital glands, between the fiftieth and sixtieth days, during which period two distinct, nail-sized, whitish patches appeared on the right side of the tongue; and a pea-sized ulcer, superficial in site and with a reddened halo, on the inner face of the left tonsil. At this time, then, the patient's condition was briefly this: Mucous patches of tongue; tonsillar ulcer; cervical and inguinal adenopathy; cicatrized chancre, with pea-sized indurated nodule in its site; vague pains, and general malaise. On the body appeared an eruption which was in full evolution by the sixty-fifth day.

At the last named date it could be described as follows: The eruption appeared in smaller and larger, distinctly defined and slightly elevated, large coin-sized disks, covering the scalp, trunk, belly, back, and extremities. The patches were of a crimson-reddish shade when deprived of their scales, the latter being imbricated and of characteristic silvery whiteness. In brief, it was impossible for me, after prolonged and careful scrutiny, to recognize any features of this eruption different from those previously exhibited upon the surface of his skin. He also, long familiar with the symptoms displayed upon his integument, pronounced this to be the same in all respects as that spread before his own eyes during the successive outbreaks of the preceding five years.

The patient was now, for the first time, placed on a mercurial course; and all treatment of the psoriasic condition, both internal and external, was for the time suspended. From this date a gradual change was effected in the character of the general symptoms. The eruption, which may be described as psoriasic, slowly disappeared during the ensuing two weeks, and in proportion as it abandoned the surface of the skin the latter became the seat of an efflorescence made up of groups of pustules in series of development. These require a brief description, as, during the subsequent evolution of the syphilis, they constituted its most pronounced feature.

The pustules belonged, for the most part, to the variety of syphilitic lesions of the skin, described as the "small, flat, pustular syphiloderm." They were flattish or globoid in shape, and varied in size from the rape seed to the coffee bean. They were most often recognized in groups, arranged in the center of deeply reddened and tender patches of skin, infiltrated in broad areas. They occurred chiefly over the scalp, nucha, ears, chest, fore arms, thighs and legs. These pustules became rapidly covered with friable, uneven, yellowish and yellowish-brown crusts, beneath which a very superficial ulceration appeared. As the disease progressed, these ulcers occasionally deepened, especially over the lower extremities, where shallow circular pits formed, requiring a stimulating dressing before they underwent repair. In their completest expression, the appearance of the patches of disease under observation was certainly suggestive of eczema. Peculiarly persistent and characteristic oval patches of this kind, several centimeters in diameter, were thus formed upon the extensor faces of the legs, immediately below the patellæ. These were reddened and oozing, crusted where pustules had originally existed, and crusted also in places where there was merely desiccation of the ooze in yellowish-brown, flattened, granular, more or less adherent, poorly contoured crusts, strongly resembling those characteristic of certain forms of seborrhœa oleosa of the face. The surfaces thus affected were often quite painful. At the date of this writing, June 10, 1883, no cutaneous symptoms have appeared more widely divergent from the psoriatic type, than those here described.

During the period which has elapsed since the evolution of the symptoms which markedly differed from those first noted, the course of the disease, or diseases, under consideration, has been characterized by a striking uniformity. It may be here stated that the patient, after the appearance of the pustular syphiloderm, was kept steadily under the influence of mercury, administered both by the mouth, by inunction, and by fumigation ; the arsenic having been completely suspended up to the first of June last. The reason for the change in the treatment, at the date given, will appear later. The patient kept careful observation of his weight during this period, and when he lost in flesh, he was placed at once upon ferruginous tonics, to the exclusion of all other internal treatment.

It may be said in brief description of the cutaneous symptoms occurring in this case subsequent to the first development of the last occurring disorder, that no lesions of a new or strikingly different type were at any time presented, but that there has been a regular and continuous development upon the skin, of groups of superficial pustules, similar to those already described. These unmistakably decreased in number and in the frequency of their formation, as the treatment progressed. *Pari passu*, however, as these lesions exhibited the changes described, there appeared and spread over certain portions of the body, other cutaneous lesions of a distinctly psoriasic type, totally different from the recognized squamous syphilodermata, apparently taking possession, area by area, of the field abandoned by the syphilitic lesions. When these two distinctly different varieties of lesions could be recognized simultaneously upon the surface of the skin, the most careful examination failed to detect any combination of the two, in what might be described as "mixed" symptoms.

The following description of the condition of the patient on the 14th of last March, may fairly well illustrate the points to which attention is here directed.

The patient was weak and anæmic; exhibited a mild grade of post-cervical adenopathy, two mucous patches on the tongue, and some engorgement of the pillars of the fauces. The primæ viæ were in fair condition. A few friable crusts superimposed upon tender, finger-nail-sized exuding patches, were distributed among the sparse hairs of the scalp. On the right side of the nucha was an egg-sized tender patch, eczema-form in type, where the reddened and infiltrated skin, distinctly oozing at several points, was also covered here and there with yellowish-red, friable and granular crusts. Precisely similar, irregularly annular, and tender patches swept over the upper rim of each aural pinna. On the brow were two insensitive, circular, small egg-sized patches, perfectly dry and scaling, the scales being whitish and lustrous. On the removal of these appeared moderately reddened, smooth and glazed disks, with a decided tendency to centrifugal clearing.

The back, shoulders, and belly were fairly well covered with insensitive, punctate to nummular, circular, scale-covered disks, showing, when the scales were removed, reddish, bleeding, or slightly glazed surfaces. A few of the larger exhibited annular forms in consequence of central involution. When not subjected to erosion, these lesions were uniformly dry. Not a pustule nor a patch of exuding surface could be seen upon or between any of them. The same general condition, though with the development of far fewer lesions, was recognized upon the arms, forearms and ankles. The hands and feet were entirely exempt, including, of course, the palms and soles; which latter, it may be remarked in passing, were similarly exempt throughout the entire course of the two diseases.

The integument of the penis exhibited several small, dry, scaly or reddened patches. On the right of the scrotum was an area, measuring three by five centimeters, moist, reddened, and tender. Situated nearly centrally as regards the patch, was a friable, dark-brown crust, thickest in its center, of rupioid shape, and as large as a coat button. Beneath it was a shallow, circular ulcer of corresponding size, secreting a thin, puriform fluid. Palm-sized and arger, reddened, and infiltrated areas of integument were to be seen on the antero-lateral aspects of the thighs. These were tender and painful, and a few well formed, split-pea sized pustules, with scanty, interspersed, friable crusts, were here and there visible. Areas, very similarly involved, stretched from below the patellæ to the middle of the anterior faces of the two legs, but here were six or eight button-sized, rupioid crusts, overlying shallow ulcers. Where there were no crusts, there was evidently a slight ooze, from beneath thin, very irregular, ill-defined concre-

tions, resembling those found in certain forms of seborrhœa oleosa. These were the most tender and painful of all the patches on the body. Lower down, or near the ankles, as already intimated, were nummular, psoriasiform, dry, circular, scaling disks, their shining and whitish scaly thatch often projecting beyond the distinctly defined outline of the disk.

The inguinal adenopathy was of moderate grade; and careful observation could still detect a slight degree of thickening in the lower limb of the prepuce, where the initial sclerosis first appeared.

For the purpose of experiment, the iodide of potassium was on several occasions administered in full doses, for weeks at a time, during the progress of the case, without the production of iodism, and with no special effect upon the eruption, which, however, did not fail to pursue its uninterrupted progress toward involution; as indeed had been the case when mercury had been administered in alternation with a ferruginous tonic.

By the first of June the decided preponderance of the psoriasiform over the syphilitic lesions suggested a return to arsenical treatment. This was instituted by administering the combination of the mercuric bychloride, the liquor arsenici chloridi and the tincture of the chloride of iron, with dilute hydrochloric acid, suggested by Professor Goodell, of Philadelphia, and known as his "mixture of the chlorides."

This has been steadily continued up to the present date, July 1, 1883, the patient manifestly improving under its use. He now presents the appearance of one who is affected with psoriasis vulgaris, very few anomalous patches existing upon the skin; and no lesions upon the mucous surfaces.

It is interesting to note in this connection that the patient himself, in consequence of his rather extended study of psoriasis in his own person, was enabled to discriminate intelligntly between various groups of symptoms displayed in the course of his case. The impression thus produced upon one who, though most interested in the issue, was yet in total ignorance of the significance of the special symptoms of his two diseases, is certainly not without some value. For this reason, on the 4th day of June, 1883, I had him remove his clothing and seated myself, pencil and paper in hand, immediately before him. The following questions were asked him by myself and his responses were taken down *verbatim*, at the time. It is necessary to explain that the words "new" and "old," as applied to his diseases, were terms which he had himself gradually come to employ in the course of his relations with me:

"Mr. M.," said I, "I desire to verify by your own statements my notes of your case, which now extend over a period of several years. I propose to ask you some questions and to write here your answers. From the time when you first became affected with your old disease (that is, psoriasis) to the date when you first acquired the new disease (that is, syphilis) were you ever entirely free from all traces of the former?"

He responded. "No, sir; there were always some patches of the old disease about me, even when I was not suffering from the severe attacks."

"Well," I returned, "that period extends from the fall of 1875 to the fall of 1882—over six years. In that time do you think that you had become so well acquainted with the symptoms of your skin disease as to be quite sure of recognizing them under all circumstances?"

"Yes, sir; I am quite positive that I could."

"Now, returning to the earliest eruption, after you acquired syphilis, to which disease did it belong?"

"It belonged to the first; there can be no doubt of that. I remember it particularly because you said that the old disease would probably be somewhat modified by the new one, and I was considerably disappointed when I found at first it was nothing less than the same old eruption."

"What happened next, do you remember?"

"Yes, the old went away for the first time, completely, since I had it; and then the new one came on."

"Was there then any of the old mixed with the new?"

"No, it was all the new."

"Are you sure of it?"

"Yes, sir; quite sure."

"Has any of the old appeared since then?"

"Yes, it has appeared since."

"Have you now upon your person any of the old disease?"

"Yes, sir, the new and the old, both."

"Have you until lately seen any of the old?"

"Well, I will tell you just how it has been. First, it was all old, then it was all new. Then gradually there was more and more of the old, and less and less of the new."

"What would you say was the difference between the new and the old, and how do you recognize this difference?"

"Why, that is simple enough. The old began as a sort of small red bunch or spot, then it would scale, and you could see the red about the scale. This new disease never does that. It forms a sort of gum, and then oozes and dries. The old had a smooth scale. The scale of this new disease crumbles up, which the old never did."

"Now I will ask you if you can tell me to which disease the several patches now visible upon you body belong."

"Certainly, I can."

"What are those on your forehead?"

"They are those of the old disease."

"What disease produced those on the belly?"

"The old."

"What disease those on the back?"

"The old."

"What disease those on the buttocks?"

"The new."

"What disease those on the knees?"

"The new."

"What disease those on the legs?"

"The new."

In this way the patient very promptly and confidently answered each question that was addressed him. It certainly occurred to me that his responses were made with an accuracy greater than that of the

medical man who is not specially expert in the diagnosis of cutaneous affections.

The only other case which has fallen under my observation of syphilis in a psoriasis patient, may be more briefly described. The patient was an unmarried man, 22 years of age, slim in figure, and a dark brunette in complexion. He lived in a neighboring State, and I saw him but rarely. In the fall of 1881 he visited me for the purpose of being advised respecting a typical and fairly well generalized psoriasis, displayed in coin-sized patches over the dorsum and anterior face of the trunk—in more diffused areas over the scalp, and in still smaller disks over the elbows, forearms, knees and legs. These were typical in aspect, though of a decidedly dark livid hue when the scales were removed, a feature not uncommon in indolent patches of psoriasis when seen upon very dark skins. The hands and feet were exempt from disease. Many of the disks on the trunk were annular in shape, as the result of centric involution.

He remained for two weeks under observation, and then returned to his native place, writing me several letters during the ensuing winter, in which he reported a favorable progress of his case. In the ensuing spring a hastily written note advised me of his intention to return immediately to Chicago, in consequence of a serious complication of his disease. He presented himself in April, of 1882, and his history and condition were then as follows:

In the latter part of February, when he was almost entirely free from cutaneous disease, he noticed after a suspicious exposure of the genital organs, an ulcer of the glands, which had been freely cauterized by a physician to whom he had shown it. The incubative period could not be determined, as he had been living a very disordered life. The sore was slow in healing, and meantime several nodules appeared in the groin. After this he began to lose flesh gradually, and to suffer from vague pains. That which chiefly excited his alarm, and had precipitated his return to the city, was the appearance not many days before of a generalized rash. His complaint was chiefly of sub-sternal and occipital pains.

When examined he was seen to be pallid and considerably thinner in flesh than before, with an anxious expression of the countenance. There was moderate post-cervical and inguinal adenopathy. The velum of the palate was engorged but not ulcerated. There was a single reddish-white, finger-nail sized patch on the inside of the lower lip, whose development had doubtless been hastened by his habits as a smoker of tobacco. The hairs were, to an evident degree, loosened in the follicles on the vertex of the scalp.

The eruption he exhibited I had the opportunity of studying with especial care for about half an hour. I could not, however, in this way detect any essential variations from the condition he had exhibited to me during the preceding fall. My eye was particularly impressed with the same dull livid hue of the psoriasic patches, more particularly those on the trunk, a color which had especially characterized the disease when it was first submitted for examination. The same regions were involved, viz., the scalp, the trunk and the extremities. The face, hands and feet were exempt. The disks were guttate and nummular, quite dry, well covered with scales, and merely did not exhibit, as they had before, the clearing center where involution had been in progress. There were no pustules, nor infiltrated and weeping patches, such as were seen in the case described above. The eruption was displayed rather more plentifully than at the date of its previous examination.

Certainly there was here no cutaneous symptoms of systemic infection, the syphilitic influence being limited in expression to the subjective sensations, the evident cachexia, the engorgement and enlargment of the glands, the moderate defluvium capillitii, and the lesions seen upon the mucous lining of the palate and mouth, the complexus of the whole occurring after an incubative period. The skin was, without question, in a purely psoriasic state. It is, however, to be admitted in this case, that it was not absolutely clear that an unusually prolonged incubative period had not occurred, while as a matter of fact the patient was not sufficiently long under observation to establish with certainty all the facts in his case. He left Chicago immediately after this last examination, and, returning to his home, suffered from business reverses, which so changed his plans that he soon after left the State, and has not since been under my observation.

Summarizing the facts and properly established conclusions suggested in a study of these two cases, we find:

1. Two patients affected with generalized psoriasis become unmistakably syphilitic.

2. At the date of the explosion of syphilis (or in one case possibly slightly before that period), both patients are seen covered with an abundant psoriasic eruption of typical aspect. In the verbal discussion of these cases at the last meeting of the Association, I suggested that the skin, long accustomed to the "trick" of the psoriasiform development, responded to the incentives of the new disease by an eruption precisely similar to that it habitually displayed

3. In the former of the two cases reported, the psoriasiform eruption is succeeded by the appearance of a pustular syphiloderm, irregular in type, anomalous in certain features, and erratic in development, modified indeed subsequently by mercurial and other treatment, but not thus made to change its essential features. With this there is no admixture of a psoriasic eruption.

3. As this same case progresses, the purely syphilitic symptoms gradually give place to those of a purely psoriasic type, till the latter preponderate and are finally completely substituted for the former.

5. From first to last, no lesions, nor groups, nor series of lesions, can be recognized as exhibiting features common to both of the diseases in question. The two, when simultaneously recognized upon the surface, are separately evolved, in different regions of the body, in separate and definite forms.

6. These two forms may be described as, first. typical psoriasis; second, modified syphilis.

7. The modification of the syphilodermata was

not in the direction of the psoriasis, nor of any similar disease. If such a modification be admitted in this case, as the result of the specific influence exerted by the psoriasis, it was in the direction of the eczematous, and not of the dry and scaling exanthemata.

But, 8. The modification, here to a degree recognized in the course and features of the syphilodermata, need not be explained by the supposition that the psoriasis exerted a specific effect upon the other disease. It is reasonable to conclude that any prolonged cutaneous affection, one also long treated by external remedies of a stimulating character, would leave such an impression upon the skin as to somewhat modify its expression of the syphilitic influence.

9. It is interesting to note here, that the palms and soles were not invaded, regions where the differential diagnosis between the two diseases in question has been studied with special care.

10. Indeed, surveying the points upon which stress is generally laid in establishing a differential diagnosis between the two diseases, it will be seen that when the two co-exist, the value of these diagnostic differences, however great under other circumstances, is then materially diminished. These points are, the symmetry of the one disease and its relative failure in the other; the palmar and plantar involvement, already referred to; the abundance, or the reverse, of the scales; the size and degree of infiltration of the involved areas; the color of the patches; the establishment of a neoplastic development in the skin of certain syphilitic subjects; and the well-known tendency of psoriasis to invade the regions of the elbows and the knees. It is a sufficient commentary on all these points to refer merely to the fact, well illustrated in the cases here reported, that the syphilitic patches of moist and eczema-form type, were found over the extensor faces of the knees; and that the typical psoriasic disks were not seen here, but in perfect development over the belly, the forehead, and the scalp.

This subject may be well concluded with the briefest reference to the coincidences of a few other non-syphilitic diseases with syphilis. In class IV of the hæmorrhages, is named purpura rheumatica, or peliosis rheumatica. I was lately asked to see a patient in the Cook County Hospital, of Chicago, with Drs. R. N. Isham, N. Bridge, J. H. Hollister, and others. The man was unmistakably affected with the symptoms of land scurvy and syphilis. He was not in a condition to give an account of himself, and it was hence difficult to determine which disease had preceded. Numerous coin- to palm-sized hæmorrhagic patches, some evidently of long standing, were distributed over the trunk and limbs, and there had been hæmorrhages from the mouth and nostrils. A recent pustular syphiloderm, with small-sized lesions, was dispersed among the hæmorrhagic patches, rarely over the discolored parts, and traces of the induration of the initial sclerosis with inguinal adenopathy, could be recognized in the genital region. We had no difficulty in going over separately each region of the body, and determining what lesions should be aseribed to each of the two diseases present. Sufficient was known of the history of the case, to make it certain that the patient had the scurvy before he suffered from syphilis.

In Class V. of the hypertrophies occurs argyria, several typical cases of which have been observed in syphilitic subjects. Yandell's two cases (*American Practitioner*, September, 1872) are reported as having been relieved by mercury and iodine. I have seen two typical cases in syphilitic subjects, both presented in public at my clinic. The bluish slate color produced by the silver nitrate was finely exhibited on the face and upper portion of the chest of each patient, regions spared by the syphilodermata elsewhere visible in each case. The patient, it may be said in passing, believed the dyschromia to be the result of the infection.

A male patient, twenty years of age, affected with congenital ichthyosis simplex, presented himself to me in the fall of 1880 with an infecting chancre of the prepuce, followed by a rather severe form of syphilis. The ichthyotic disorder of the skin had almost completely spared the face, being decidedly in best expression on the extremities, including the hands and the feet. In this case the prominent symptoms were those of syphilitic involvement of the mouth, throat, and larynx, which complications were both prolonged and obstinate. On the skin there was seen at one time a development of the small, flat pustular syphiloderm, conspicuously about the mouth and anus, and over the scrotum. The alopecia with remaining dry, lusterless hairs was considerable. In those parts of the extremities covered with typical and distinct polygonal and diamond-shaped ichthyotic plates, no syphylodermata were at any time recognized. The cutaneous symptoms throughout were indeed trifling. The patient was under my observation for two years in the city of Chicago, after which he removed to Montana. Though naturally of a delicate constitution, he made a fair recovery, and wrote me lately that he was under an engagement to marry.

Class VI of the atrophies included alopecia areata. I confess that during the past two or three years the suspicion has been more than once awakened in my mind that syphilis might be one of the several exciting causes of this singular disorder. I have notes of four male patients, all in early adult life, who exhibited alopecia areata of the region of the beard, during the first year after syphilitic infection. Of course the question arose in each case, Was not this a form of alopecia syphilitica of the region named? In all these cases the defluvium capillitii was sudden, and involved perfectly well-defined, abnormally white areas, varying from the size of a silver dollar to a hen's egg. Each was completely destitute of even a single hairy filament, when examined, not even lanugo hairs appearing under an inch objective. These bald patches were in no instance either preceded or followed by syphilodermata of the affected areas, the hairs, also, of the unaffected regions of the scalp and beard being retained in normal vigor and abundance. In one place a few patches formed on the scalp. Two were exceedingly well-marked representatives of the Jewish race, with abundant growth of jet-black hairs in the beard. Only one of the four had what might

be termed a severe form of syphilis. He presented himself at the first exhibiting a generalized papular rash, with a few pustulo-crustaceous lesions about the nose and cheeks. A group of these ulcerated, and left a characteristic bean-sized scar in the center of the right cheek which I have had the opportunity of examining afresh since this paper has been in preparation. The alopecia areata appeared later, and spread beneath the angle of the jaws, sparing the region of the scar left by the syphilodermata.

It need scarcely be remarked, in conclusion, that the diseases in the last class, produced by the animal and vegetable parasites, are seen in equal development on the skins of the syphilitic and non-syphilitic. The former furnish a list of patients figuring in all statistics of dispensary, hospital and public practice. As a rule, no modification in the symptoms of these disorders can be determined, when they are studied on the syphilitic skin. Ringworm in uncomplicated forms I have seen several times on the beard of the subjects of an active syphilis. Tinea versicolar might almost be described as of common occurrence, on the chests of adult male syphilitic patients applying for public relief. I have often observed this coincidence without making note of it, and therefore merely refer here to the six last cases observed by myself. One of these concerned the breast of a young woman, infected by her husband with syphilis. The characteristic patches of the parasitic disease were in all unmodified, and the microscopical appearances of the fungus were those commonly seen. In three of these cases the disease was supposed by the patients to be of syphilitic origin. In no one was there any difficulty in removing the mold by the proper measures.

The animal parasites flourish with even greater frequency, on the filthy skins of many of the syphilitic patients of both sexes presenting themselves at the dispensaries of the large Western cities. As for the lesions which they induce upon the syphilitic skin, and between syphilodermata, it has been before remarked that the advanced students attending the clinic are enabled to point out the individual signs of the one and of the other disorder on the same skin. I cannot recall a case where the largest invasion of the skin by bugs and lice, has made the diagnosis of syphilis, in dispensary and clinical practice, a matter of difficulty.

If time permitted, it would be interesting in this same connection to review briefly the disorders of the human system not attended with cutaneous lesions, whose evolution progresses in the syphilitic patient, apparently without interchange of the resulting phenomena. I have seen several well-marked cases of pulmonary phthisis and Bright's disease of the kidneys survive, contrary to my expectation, a syphilitic infection. During the past winter, my colleague, Dr. Chas. T. Parkes, performed ovariotomy at my request, upon a female patient under my care, affected with gummata of the lower extremities, some of which had left palm-sized cicatrices upon the anterior faces of the lower extremities. The ovarian fluid and tumor together weighed in this case 18 pounds. The patient recovered without a single mishap, and consulted me in two weeks after she had resumed her usual avocations, for a recurrent tibial osteoscopic pain.

My apology for the length of these remarks is to be found in the very generally received opinion, to which reference was made at their outset. It seemed to me that the time has come, when it should be more distinctly recognized that syphilis is syphilis, and not essentially any other disease; that its symptoms are to be regarded as trustworthy signs of its existence and of the existence of no other disease; that the loose opinion respecting a so-called "syphilitic element" in any doubtful case, is usually begotten by a faulty diagnosis; and, finally, that syphilis may coexist with a long list of diseases, without betraying an essential modification of either the one or the other.

PÆDIATRIC THERAPEUTICS AND ITS RELATION TO GENERAL THERAPEUTICS.

BY J. B. CASEBEER, M.D., AUBURN, IND.

[Prepared for the Section on Diseases of Children, June, 1883.]

In a lecture delivered recently to the class of medical students at Bellevue Hospital Medical College by my former preceptor, a thorough gentleman and scholar, Prof. A. A. Smith, on the frequent repetition of doses of medicine, he clearly opens up a field of investigation which, to my mind, is one of the greatest importance. It is as it were a rich mine of truth heretofore but slightly developed, and only been tested by the skilful assayer sufficiently to certify to its intrinsic value, and in it we may find leads of rare value, some of which he there uncovers so that we may peer in on its richness and beauty.

I believe and trust that the time is not far distant when from them we will learn important and practical lessons which will greatly contribute to our success in our battle with disease, and thus bless our noble profession as well as our beloved humanity.

One of the very important questions of the day now is, do we seek for the *physiological* effect of medicines, or do we derive their full poisonous or *drug* effect when we administer them to our patient?

If the former (and to my mind that is what we usually seek for), then certainly that can be better obtained and maintained by the small and frequently repeated doses, and thus, too, we can the better avoid the deleterious and often dangerous effects of the latter. The doctor in his lecture gives us his experience coupled with the experience of some others in the small and frequently repeated doses of chlorate of potash, croton chloral, bicarbonate of soda, balsam of copabia, atropea, the bromides, chamomilia, tartar-emetic, nux vomica, cantharides, pulsatilla, callabar bean, ergot, aconite hamamelis and belladonna. The experience he narrates to the class is quite strange and interesting indeed, and certainly pregnant with important facts and suggestions. I perhaps would have paid less attention to it if I had not had the same experience in the use of some of the medicines mentioned, and knowing by experience that in them the doctor was correct, I was the more

encouraged to test some of the others also, which I find stand the test. I am very much obliged indeed to Dr. Smith for that lecture, the reading of which to me was of peculiar interest, partially perhaps because I had been studying and experimenting in the same direction and was thus aided and encouraged, and also because I believe it leads us in the proper direction and into territory that after careful survey will discover to us principles that will tend to the permanent exaltation of our profession by rendering it more efficient in the glorious work in subduing disease, and thus the more fully a blessing to suffering humanity. I trust that we may as a profession follow in the direction he thus points and where he may lead. If not regarded as presumptious, I would like to add my feeble testimony in support of the doctor's statement as well as a little additional of my own experience and observation in the use of aconite, belladonna, nux and ipecac, and also bring into the same category lobelia, asclepias, baptisia, santonine, hyposulphite of soda and veratrum viride. And this I will endeavor to do briefly, not stopping to give a theory or reason why: but, like my illustrious friend, content myself with the statements that any one can verify for themselves and then form their own theories, and in this I will endeavor to confine my remarks to the treatment of children especially.

I have fully verified the happy result of Dr. Smith in his experience in giving one-third (⅓) to one-half (½) minim of tincture aconite every 15 to 30 minutes to his adult patients in fever. I have often found that in children suffering with fever, hot skin and dry throat, restless, with feeble, frequent and thready pulse, the best perscription I can give my little patient is 3 to 5 minims of tincture rad. aconite put into four (4) ounces of water, and to a patient of 2 years old give of this mixture one teaspoonful every 15 minutes. Under this treatment my patient will soon begin to rest, the pulse becomes less frequent, soft and of better tone, perspiration will soon be manifest, the temperature will come down, more secretion of the mouth and throat is established, croupal symptoms will subside, tonsilitis, pharyngitis and bronchitis, if present, will be ameliorated. Aconite is capable and has produced such excellent results in the treatment of children that some are desirous of calling it the childrens' medicine, but experience proves that where it is appropriately used in proper doses its effects are just as desirable when given to the adult. If an inflammation is actually attacking our little patient, and is manifested by a full bounding pulse, this can be the better controlled by the use of 2 or 3 drops of Norwood's tincture of veratrum viride either as a substitute for or in connection with the aconite in four ounces of water given similarly. If diarrhœa with fever exists, the use of the 3 drops of aconite with 3 to 6 drops of tincture ipecac in 4 ounces of water is given in teaspoonful doses every 30 minutes the results will be very desirable and even surprising to those not accustomed to its use. The same is true in proportionate doses when used in the adult.

It controls nausea and vomiting when thus given in small doses.

Belladonna in small doses, as the Professor suggests, gives us excellent results, especially with children, and is also capable of extensive application. If given in small doses will give surprising results (perhaps as a capillary contractor) in case of local congestion. In pulmonary congestion, when combined with aconite or veratrum, if specially indicated by the full bounding pulse, I have no doubt, if used in time, by far the majority of pneumonias and local inflammations can be aborted. If our little patient is dull and drowsy, face restless or expressionless, circulation feeble in the skin, as indicated by a livid color, the capillaries slowly filling after being emptied by pressure; or in the brain, as indicated by a dilated or immobile pupil; or in the bladder, as indicated by the passage of large quantities of limpid urine, or incontinence and involuntary discharge of urine—nothing have I ever found so reliable in moving these abnormal symptoms, with their causes, as small doses of belladonna frequently repeated. Dose for children two years old, for example, about one-eighth to one-fourth minim, repeated every one or two hours, as symptoms require; excellent also in the debilitating night sweats of the adult in proportionate doses. Doubtless the experiment of Brown-Sequard first led the profession to the use of belladonna in all congestions producing dilatation of the capillaries of blood-vessels, as they thus proved its special influence was to contract the capillaries.

In this respect it is the opposite of gelseminum, whose special province seems to be to control irritation; thus to stop or lessen the determination of blood to a part, and thus preventing the congestion by removing the cause; but where the congestion is fully established, a partial paralysis, and thus dilatation of the capillaries is produced, then belladonna becomes the appropriate remedy.

In eruptive fevers its influence is to bring the eruption to the surface by overcoming internal congestion, and thus equalizing the circulation by determining to the skin. I believe when we better understand the nature and influence of the deadly night-shade, its belladonna and atropine will occupy a still more important place in our materia medica, and especially in the prescription of the coming physician.

NUX VOMICA.

Some one has said that nux vomica is the tonic of children.

It is received kindly by the stomach, improves the appetite and digestion, as well as tones up the debilitated nervous system.

It thus proves itself to be the remedy in nausea and vomiting, as well as infantile colic and irritation of the brain and spinal cord when due to enfeeblement.

One or two drops of the tincture in four ounces of water, or five to fifteen to the adult, one teaspoonful given every twenty minutes will give us excellent satisfaction if our case is properly diagnosed. We like its effects in diarrhœa of children, where the abdomen is full and flaccid, and especially where the pain is

similar to colic and located at the umbilicus. In cholera infantum it is one of the important remedies if there is atony of the bowels, with enfeebled innervation and circulation.

IPECAC.

Why does the medicine whose special province heretofore has been to produce nausea and vomiting now prove itself so efficient (as the Professor reports) in obstinate cases of vomiting and diarrhœa, when given in small doses frequently repeated? In my mind the question arises, is not the kind physiological effect of ipecac always to relieve irritation of the mucous membranes, and its drug or poisonous effect the opposite?

To satisfy the skeptical mind, let the intelligent practitioner try it in cases of irritation of the stomach, bowels, or bronchial tubes, in small dose, such as tinct. ipecac two to ten drops, according to the age of the child, in four ounces of water, and given one teaspoonful every fifteen to fifty minutes, and in adults in proportion, and when he obtains the certain relief from obstinate nausea, vomiting and diarrhœa which he certainly will when due to irritation; diarrhœa of the simplest form to the severer cases of cholera infantum or dysentery, and when accompanied with fever, combined with similar doses of aconite; then let him answer in his own mind whether he is better pleased with the physiological or drug effect of the remedy. In this respect ipecac seems to be the converse of nux vomica, which proves so efficient in the same disease, when due to enfeeblement or atony instead of over-excitement or irritation.

LOBELIA.

Let us hastily glance at this, another of the nauseant and emetic medicines when given in full doses. Like its relative, ipecacuanha, its physiological is different from its drug effect. Given in cases of difficult or oppressed breathing, suffusion of the face, congestion, and especially in mucous rattling of the bronchial tubes, small doses of lobelia will improve innervation, give energy to the oppressed organs, and enable them to throw off the congestion and oversupply of mucous secretion; while in a little larger doses, short of its emetic effect, it is an excellent antispasmodic in croup, asthma, and, in the hands of the obstetrician, proves a kind and valuable remedy in overcoming the rigidity of the *undilatable os uteri*, when given in one-drop doses, repeated every fifteen to twenty minutes.

BRYONIA AND ASCLEPIAS.

These two medicines, whose special province seems to be to allay irritation of serous membranes, sometimes surprise us with their kindly and positive influence.

Well do I remember, some years ago, of attending on a Mr. F., æt. 40 years, German descent, usually healthy, strong and robust, but then suffering with severe pleuro-pneumonia, and most intensely with the pleuritic stitch, which was so interfering with respiration as to be alarming at times; and after prescribing the usual sedatives, aconite and veratrum for fever, with full doses of Dover's powder and morphia to control the pain, and feeling confident of early relief, I repaired to the country. But some hours after my visit, instead of the expected relief the pains in the chest became more severe and the interference with respiration more alarming, and another physician, my friend T. G. Matheny, was called to administer to him until my return. His prescription was tinct. bryonia and tinct. asclepias āā gtt., xx.; water, ℥iv. M.; sig.: One teaspoonful every thirty minutes until pains were relieved, and every hour thereafter.

On my return and learning the above facts, and having confidence in the intelligence of the physician, and seeing the relief approaching, I continued the above prescription, not resuming the opiates, which had been set aside. Next morning I found my patient almost entirely free from pain, and fever very much abated, perspiration well established, and my patient very cheerful.

During the week following the pains would occasionally return, but would again subside under the influence of the bryonia and asclepias. This repeated experience strengthened my resolution to study to know more of these remedies, and to more fully test them in other cases, which I did, usually with good satisfaction. After careful study and experiment, I find, as I believe, the physiological effects of bryonia to be sedative to serous membranes especially, and thus a remedy in irritation of such membranes, whether of the chest as in pleuritis, or in the joints as in articular rheumatism, or abdomen as in peritonitis, and more especially if the pains are lancinating and accompanied by a tension of the muscles of the affected part, and excessive tenderness on pressure or motion of the parts, accompanied with restlessness, high fever, hot skin, and hard chorded pulse; asclepias, as a type of diaphoretics, certainly quiets the nervous system, brings down the temperature, induces perspiration, relieves pain in serous membranes, and is thus a valuable remedy in such inflammations, and especially when accompanied with a hot, dry skin.

BAPTISIA.

Although I have used this remedy for many years in my treatment of children in septic fevers, believing it to be antiseptic and thus antifebrile, I confess, however, to many disappointments in its use, and a very imperfect knowledge of its real nature, and although we think we know more about it now than we did in former years, yet we know but very little, compared to what we believe is to be known of its therapeutic properties.

I remember reading an article written by Prof. Scudder, of Cincinnati, in which he regarded it as an antizymotic, and its antiseptic and antifebrile properties depending on its power to antidote a peculiar ferment or poison in the blood causing the attendant fever, and this having peculiar manifestation, different from any other poison, producing a peculiar dusky color of the face, like one who had been exposed to severe cold. He recommended it in cases where the sepsis produces a deep red or violet color of the mucous membrane, with brown or black shade or

tinge, and especially where there is foul breath, with a tendency to ulceration, and since using it in that class of cases, and in ulcerative sore mouth and throat, especially where there is any putrescence, both locally and internally, I am the better pleased with its effects.

Dose to child:

Tinct. baptisia.....gtt v to xx.
Aqua dist.....℥ iv.
M. S. One teaspoonful every one or two hours.

SANTONINE.

We usually think of santonine as a vermifuge only, in which it stands at the head of its class; but it has other important properties. I will not tarry now to discuss how or why it has a peculiar influence over the bladder, which renders it so efficient in overcoming, in some special cases, that severe burning or scalding sensation and tenesmus of the bladder, but only stop to say, in addition, that in some cases of retention of urine, a few small doses of santonine will prove to be the remedy *par excellence*.

HYPOSULPHITE OF SODA.

Last but not least, I wish to notice briefly hyposulphite of soda.

Standing as it does in the list of alkalies, and fulfilling their general indication, yet it seems to subserve a special purpose of its own. If we have acid fermentation in the stomach, indicated by acid eructations, coated tongue, or rather furred with a white or grayish-white or dirty color, accompanied, in children especially, with colic and green acrid discharges of the bowels, we naturally think of alkalies. If our patient is suffering with boils or abscesses of the cellular or muscular tissue, we say lime is the remedy, as it is the salt which preserves these tissues; or, if the coating of the tongue is a clean white, in the absence of any destruction of tissue, we use bicarbonate of soda, believing that through its influence on the blood it influences nutrition as well as antidotes the acid; but when we have the dirty gray or brown color, tongue pallid and broad, accompanied with foul breath and fever, then the antizymotic influence of hyposulphite of soda will correct all, and lead our patient out into the sunlight of health and happiness.

I have thus briefly dwelt upon some of these remedies, and referred to my own experience, with that of others, and thus challenge the attention of this Section for the purpose of showing as practically as I possibly can, the true relation existing in the treatment of children and adults, believing that if we candidly consider the true relation, we will reasonably conclude the way to treat children is to consider them human beings—offspring of their parents, subject to like infirmities and diseases, and to be similarly treated with proportionate doses, and this will simplify the study for the earnest student and enhance the sufficiency and proficiency of the therapeutist.

It is in the interest of the children also that I ask the intelligent attention of all concerned, and especially the college teacher, to the similarity of medication in all ages, and that to be suggested by the existing symptoms—not allowing the name given to the disease or name or age of our patient to drift us from our moorings, but ever aim to overcome the existing symptoms by their appropriate remedies. We should also encourage careful observation on the physiological action of medicines, as being of equal if not of paramount importance to its toxic effects (for I believe the former is what we usually desire), and thus we will be the better enabled to apply our remedies more intelligently and directly to the relief of the existing symptoms.

TRI-STATE MEDICAL ASSOCIATION.

PRESIDENT'S ADDRESS, INDIANAPOLIS, SEPT. 18, 1883.
BY WM. PORTER, M.D., ST. LOUIS.

GENTLEMEN:

In calling me to your chief office, you have given graceful recognition of that department of our work in which, with many good comrades, it is my fortune to be enrolled. For this, and for the personal compliment, I thank you. Such an act by such an Association as this, shows that here, at least, there is no conflict between those who endeavor to combat all the physical ills of humanity, however classed, and those who are devoted to special labors.

In acknowledgment, I had at first thought to present a report upon a special topic, but, thanks to the widely distributed medical journals of the day, and the compilations and reviews on every hand, there is little necessity for such a rehearsal. Moreover, I am not here to investigate laryngeal diseases or thoracic degeneration, for with you, in this good cause, there is neither aphonia nor faulty heart-action.

Therefore, gentlemen, I have chosen to speak very earnestly to you regarding the interests of this Association, and to use the position you have given me, for the cause we all hold dear. Just now, when our ranks are being rapidly filled, and our organization claiming and receiving the notice due it, cool heads, warm hearts and determined spirits are needed, that advantage may be taken of the incoming tide of favor.

One of the dangerous periods in the history of a medical society, as with a nation, is that which follows a successful struggle for existence. Then, when full life has been attained and opposition from without been silenced, sometimes a strange apathy, a satisfied drowsiness, steals over all, and soon we write, "*Ilium fuit*," or, as we would apply it, "the late medical society." If with nations "the price of liberty is eternal vigilance," with us, the cost of successful medical organization is eternal work.

Thus far we have, in the rapid progress of the Tri-State Medical Society, cause for congratulation. Much we owe to those few earnest men (need I name them?), who first laid the foundation and have since aided in every advance—to what purpose let this assembly answer. Year after year our numbers have increased and new fields have been added; medical journals from all sides seek our reports, and good friends from distant States visit us. The president of

our National Association sends us greeting, from the great heart of Gross comes a warm "God bless you," and from over the ocean comes words of cheer from our last year's honored guest—Mackinzie.

OBJECTS OF ASSOCIATION.

Having, then, attained this measure of success, let us see what we are here for, and take counsel for the future.

1. *Personal Acquaintance.*—One of the chief results of a regular attendance upon the sessions of almost any medical association, is an extension of personal acquaintance. This is a much more important matter than would appear at first sight. A recent writer says, "to know a man personally is generally to estimate him aright." Many a man can in the quiet of his own library, shut in from his fellows, write an attractive essay or composition, and yet may be of little worth in the sessions of an active medical society. Such a one is generally a failure in securing and maintaing a private practice. His want of success is not because he is a student, but because he is nothing more. I pity the man who is known to his fellows only through the medium of a printing press. The touch of a physician's hand brings him nearer to you than all the tracings of his pen. True scholarship is a royal attainment, and the press has placed the stamp of nobility upon the quiet brow of many a recluse, but to research and book lore a successful physician must add personal acquaintance with, and practical knowledge of, his fellows. The agency of medical societies in contributing to this result cannot be ignored, and a man's progress may often be traced by the impressions made by him upon his society's records.

2. *Harmony among the men of the West.*—While one of the objects of this society, in common with others, is the cementing of valued friendships and the attrition and brightening influence of personal contact, yet we have, even in this field, a more definite work.

The members of this Association are from different parts of our great Western Empire, and different State and local societies claim us. Living in these days of rapid travel and easy communication, harmony should prevail amongst us, and does. Still, except in this Association, there has been no general movement to organize our sectional elements, to bind these workers together, and with united effort to keep pace with the mighty advance of other interests around us. In other callings, I see

> "Men, my brothers, men the workers,
> Ever reaping something new;
> That which they have done, the earnest
> Of the thing that they shall do."

We have no need to blush for our own guild, but each year brings a more pressing need for union and harmony in our ranks, as well as for a better knowledge of our professional resources and advances.

In these days, societies having certain objects in view are rapidly formed, and there are special associations for almost every department. Now, let this be a special society, or rather, a society with definite objects, and these—personal acquaintance, harmony, and professional advance in the West. We want this; let us have it.

SPECIAL FEATURES

1. *Non-Legislative.*—There are some points of difference between the work of this Association and that of most medical organizations. As far as possible, it is non-legislative, all our time being given to scientific work. It has been said that its success is inimical to the interests of the different State societies, and to the American Medical Association. This is in no sense true. The men here are among the active members of the State organizations of the West, and leaders in the numerous district medical societies. We aim to refer all complaints back to such societies, and are not constituted a court to try local grievances.

2. *Loyal.*—More than this; there is probably no large society in our land, the members of which more uniformly respect and endorse the formulated principles of the National Association. I congratulate you, gentlemen, that there has been no "ethical" wrangle here, and that those guiding lines laid down by Percival eighty years ago, are honored by us to-day. We yield to none in loyalty to those undying principles which have become the watchword of professional integrity throughout the English-speaking world. Let us be very honest in our position. The Code, when intelligently understood and followed, cannot be successfully attacked. It is only when misinterpreted, and made a cloak and a defense for charlatanism and selfishness, that reproach is brought upon it. He who would bring a good law into disrepute by false rendering and oppressive enforcement, is a greater criminal than he who ignores all law. The latter acts for himself; the former brings the vast machinery of the courts to aid him. There are men who would use the Code as an instrument of torture, were it embodied in the Declaration of Independence, and there are others who would oppose it, had it been the preface to the Ten Commandments.

3. *Three Sessions Daily.*—It was certainly a proof of the earnestness with which our work has been carried on, that three years ago two propositions were accepted. The first was that we decline, with thanks, all invitations to receptions, banquets, etc., that would attract us during our sessions from our proper work. This seemed severe, but the citizens at our meeting places have understood it. We value their attentions, but work is the order of the day in these ranks, and we have plenty to do. Besides, we wanted bees and not flies.

4. *Limit to Papers.*—A second proposition was the limitation of papers to twenty-five minutes. This, too, has given a good result; for instead of a few elaborate, exhaustive, and too often exhausting, essays, we have time for more concise, practical communications, clinical reports, and discussions. These changes having become laws, I would not discuss them, we knowing their good effect.

SUGGESTIONS.

1. *Note-Taking.*—Let me take this opportunity of urging the importance, the almost necessity, of more attention to note-taking, and recording and reporting

clinical facts. While a few men write too much and too often, most men do not write enough. I can point you to men with large experience and grand opportunities for investigation; men of sober judgment and apt in their calling, who have not placed one single observation on record. Such lives are too valuable, such knowledge too dearly bought, to be sealed up when the lips are closed forever. Though the fleeting hours speed hurriedly out of sight, "thou hast not lost a day of which there is a record."

There should be a due proportion between the daily routine of practice and the literary work of the physician. A small percentage only of experience is catalogued for the benefit of others. One may be able to act promptly and speak wisely, and to little purpose; but—

> "A small drop of ink,
> Falling like dew upon a thought, prevails
> That which makes thousands, perhaps millions, think."

There is no danger that concise, well-matured writings will be crowded out of sight. The drift wood will float away, but that which is chosen by experience and fastened by logic will remain. A few sentences, carefully chosen and modestly indited, have saved many a man from oblivion.

2. *Official Reports.*—A practical suggestion here presents itself. One of the features of this Association is the discussion had upon the different topics introduced. Heretofore much of this valuable material has been lost, and at times very imperfect abstracts of papers have been furnished the journals. Thus far the medical journals all over the country have given us substantial aid, and it is not only to our interest, but a just return to them, that accurate reports of our proceedings are made.

We should have official reports, compiled and condensed under the direction of our Secretary or Committee on Publication. This would give at least a standard from which such periodicals as deserve our transactions could make abstracts. This year, happily, a number of journals are well represented by correspondents, and we should next year increase their facilities for securing our records. We believe the Association has acted wisely in deciding that our proceedings be placed at the disposal of the journals. rather than published in book-form.

3. *District Aids.*—To a further suggestion I would ask special attention. The interests of this organization are now so important that no one of them can be neglected. It is impossible, owing to the extent of our territory and rapid increase in membership, that the few chief officers can have full knowledge of the whole work. Our success depends upon individual effort. Let us choose men in each Congressional District, or in each local Society, who shall keep our Association in mind and use their personal influence for its advancement. To some extent this has been the method pursued during the last two years, and it has answered well.

Extension of Territory.—Another question that ere long we must decide is that of extension of territory. Originally including the three States, in a few years Cincinnati and St. Louis were added, which, with Chicago, Louisville, and the cities and counties already enrolled from Kentucky, Indiana and Illinois, gave the Association a large following. Delegates from beyond these confines are now sent to us, and men from other States ask to join us.

The name "Tri-State" is a household word with many of us, but the mountain stream loses its identity in, though it may give character to the river of the plains. What better structure could be built upon the solid foundations of the Tri-State Medical Society than the stately walls of a Western Medical Association.

Increase of Time.—Added territory and coming years bring the certainty of added work at our sessions. As it is now, great economy of time is required, even though we hold three sessions daily. In another year it will probaly be necessary to extend our time to four sessions, or to divide into sections during some of the sessions. The latter should only be considered when it becomes unavoidable. We can work a little longer, and move up a little closer, but let us not divide. If it should be that sections must be formed, let but the afternoon sessions be so changed, continuing general sessions both morning and evening.

Selection of Officers.—One other thought I beg leave to introduce. The selection of officers is a duty which each year demands more care. It is certainly often embarrassing for a president to choose a committee to name his successor, and at all times the best effort should be made to secure full representation and free choice. Might we not ask that the delegates from each State choose a member of the Nominating Committee, who shall represent the interests of his State in selecting the officers and place of meeting for the coming year?

And now, after a year's patient seed-sowing, your committee have secured a bountiful harvest. In just appreciation of their labors, I ask in their behalf a prompt attendance upon the order of business which they have furnished. Let these three days be grand, good days for our work—an epoch in the history of our Association.

A CASE OF AMPUTATION OF THE BREAST—WITH REMARKS.

[Read before the Philadelphia County Medical Society Sept. 12.]

BY H. LEAMAN, M.D.

Mrs. J. J. W., age 48, married 29 years, the mother of eight children, and the recipient of ten severe miscarriages, came to my office Sept. 1, 1882. She had first noticed this tumor in her breast three months previously. Her attention at that time was called to the swelling in her breast by a small pimple on the surface. Up to this time there had been no apparent change.

A tender enlargement, the size of an English walnut, situated deeply in the inner lower quarter of the left breast. During the past week—for the first time—sharp, shooting, retracting pain, piercing the nipple, had been experienced more frequently.

Menstruation ceased six years ago, without giving rise to any trouble. She had no cachexia, and was apparently in her usual health. On the 18th of September she called again. There was no perceptible increase of the growth, but spoke of a pain in the breast-bone. Amputation was recommended, the effect of which was to send her on a peripatetic wandering in the desert of therapeutics, trying electricity, pow-wowing, and homœopathy. The ignus fatuus which I had lighted brought her to me again April 23, 1883.

The tumor then was of an oval shape, four inches in length, and transverse diameter. From its inner anterior surface two cornua were extending, three-quarters of an inch in length; slightly ulcerated. The skin over the tumor and for several inches around it was deeply congested, red and inflamed. The tumor rested in front on the cartilages of the ribs, but was movable. The glands of the axilla were but slightly involved.

With assistance of Drs. Hatfield, Brubaker, Walch and R. Leaman, the breast was removed under spray, August 26, 1883, and Lister's dressing for the breast applied. One nodule of hardness in the axilla was removed. At the sternal end the incision could not be approximated within two inches, owing to the necessary ablation of tissue.

April 27.—Doing well; temp. 99½°, and pulse 112 at 10 P. M.

April 28.—Temp. 99°; Pulse 104 at 10 A. M. The breast was dressed under spray. 10 P.M., temp. 99°; pulse 104.

April 29.—Temp. 98½°; pulse 96 at 10 A. M.

April 30, 10 A. M.—Temp. 99½°; pulse 96. 10 P. M.—Temp. 98½°; pulse 92.

May 1st, 10 P. M.—Pulse 92; temp. 98½°.

May 2, 20 A. M.—Temp. 97°; pulse 84; dressed the second time; under spray; the draniage tube was removed and some of the sutures.

May 3, 4 P. M.—Pulse 80; temp. 97°.

May 4, 10 A. M.—Pulse 100; temp. 97°; dress under spray.

May 6.—Dress under spray; sutures removed and two ligatures. 10 A. M.—Temp. 98°; pulse 84.

May 7.—Temp. 98°; pulse 104; sitting up.

May 8.—The posterior three-fourths of the incision entirely healed and healthy; the anterior fourth (4 inches in length) perfectly healthy and granulating rapidly; all sutures and their remaining ligatures removed.

May 10.—The wound was dressed on and after this with iodoform, cosmoline and salicylated cotton, under which the wound rapidly healed.

Dr. Brubaker made a histological study of the growth and pronounces it carcinomatous.

As soon as the cicatrix was complete, neuralgic pains began in the left arm, right leg and body. The cicatrix remained perfectly healthy in appearance at first. The first nodule appeared in the lower part of the neck behind the left sterno-clavicular articulation. Next the left axilla and posterior and healthy part of the cicatrix began to show hardening. Now there is a chain of nodules along the whole cicatrix, one large and painful over the cartilage of the third rib, left side above cicatrix. In the left axilla is a hard pyramid, the left hand and arm swollen. The pain, lancinating, burning, and sore is referred to left scapula, arm and axilla, occasionally shooting in course of the incision.

The apparent freedom of the axillary glands at the time of the operation, and sudden developmen on the healing of the cicatrix, seems to point to the idea that the original tumor was an outlet for constitutional trouble, that being taken away, there was a sudden efflorescence. It is pretty well agreed upon that a manifestation of phthisis may follow the operation for a cure of fistula. Also the observations on the change of life in women bear upon the same point.

REPORT OF EXAMINATION OF THE TUMOR BY DR. A. P. BRUBAKER.

The tumor of the mammary gland which you sent me is firm and hard, and upon section presents a white, glistening surface, from which can be scraped a small quantity of fluid matter.

Upon microscopic examination, the connective tissue stroma is seen to be abundantly developed; in its meshes are imbedded epithelial cells, some of which have undergone degeneration. In some situations the cells are arranged in a linear manner, while in others they form groups or nests.

MEDICAL PROGRESS.

CASE OF TESTIS IN PERINEO, COMPLICATED WITH CONGENITAL INGUINAL HERNIA AND ACUTE ORCHITIS. — By J. Alex. Williams, M.B., M.R.C.S. Eng.

The patient, aged 2 years, was admitted on September 15, 1882, into the Royal Portsmouth Hospital, under the care of Dr. Lloyd Owen, by whose courtesy I am permitted to publish the case. The mother then gave the following account of his case: A lump had been observed in the right groin from birth. It was about the size of a small hen's egg, mobile, and often slipping into the abdomen. A medical man whom she consulted said the child was ruptured. The parents had noticed the absence of the right testicle from its proper scrotal pouch, and the child was often observed to be fretful and peevish without obvious cause. A few hours before admission the child came in from play crying, when the mother noticed an increase in the size of the lump, and thinking it had met with an injury, brought it to the hospital.

When examined, a large sausage-shaped swelling was observed in the right inguinal region, extending downward into the perinæum to within half an inch of the anus. A distinct sulcus was visible externally, separating its upper and middle thirds. The upper portion was tense, resonant, and presented the ordinary appearance of hernia. The lower was ovoid, dull, fluctuating, translucent, and evidently contained fluid. The scrotum was well formed and symmetrical; the rugæ well marked. The left testicle was normal in every respect; the right was absent from the scrotum, and could not be felt. Examination of

the swelling appearing to cause much pain, chloroform was administered, and the taxis applied to the upper portion, but without success. The lower portion was now punctured, and about an ounce of straw-colored, flaky fluid was withdrawn. This, upon standing, coagulated, and was evidently of inflammatory origin. This portion of the swelling was then very much reduced in size, but did not entirely disappear. The taxis was then reapplied to the upper portion, which was now easily reduced, with distinct gurgling. The testis was then thought to be indistinctly felt in the perinæum. The child was then placed in bed, and had lead lotion applied locally. Next morning the nurse reported a re-appearance of the swelling, when, upon examination, a lump about the size of a hen's egg was observed in the right perinæum, extending posteriorly to within half an inch of the anus. It was irreducible, but mobile, and very tender upon the slightest pressure. It had the feeling and general outline of an inflamed testicle; and the cord, slightly enlarged, could be felt extending from the swelling up to the groin. The skin over the swelling was slightly reddened. The bowels were naturally opened, and there was no return of the hernia or hydrocele.

September 17th. Ice was now applied locally, and the swelling subsequently became reduced in size, and less painful.

September 30th. The child looked pallid, and appeared to have suffered much pain. The testis now felt hard, smooth, ovoid, measuring two inches in its long diameter; it had become fixed, and the tissues covering it were slightly thickened by the recent inflammation. It was less painful upon manipulation than formerly. The cord felt running up to the groin was not appreciably enlarged. The right inguinal canal was rather patent, and invagination of the skin caused considerable pain. The right scrotum remained empty; the left contained a testicle.

October 1st. The patient was discharged, the mother being told to bring it to the hospital for periodical examination; at the same time, it was suggested that the testicle ought to be excised, if the child continued in pain, or had its natural movements impeded.

January 26, 1883. The right testicle is still in perinæum, of normal shape and size; there is now only a slight perineal prominence to indicate its position. The hernia is constantly slipping up and down. The left testis is normally placed in the scrotum. The child enjoys good health. He plays much without pain or inconvenience.—*British Medical Journal.*

SEA-SICKNESS. By R. VACY ASH, M.B.Aber., L.R.C.P.Lond. In this paper Dr. Ash observes: "I have an idea that the sympathetic nervous system is the culprit, for the following reasons:

"1. Flushing of the face is a common sign of the approach of nausea, and we all know that irritation of that nerve will cause this, as well as an extra secretion in a gland.

"2. There is an increase in the quantity of fluid ejected from the stomach after it has lain there for a short time. In my own case I frequently noticed, and I subsequently verified it in many others, that, if I took half a cup of beef tea, and lay in a horizontal position for a time, so as to avoid vomiting, when I did again vomit, when the exhausted muscles had regained their tone and were ready for another attack, the quantity ejected was greatly in excess of that taken in. For instance, if four ounces had been drunk, about twenty ounces would be ejected, of a sour beef-tea liquid. Now, whence did the surplus come? That it was gastric juice, may, I think, be taken for granted; for, although I had not the means of chemically examining its component parts, it certainly partook outwardly of the character of that juice, inasmuch as it would dissolve meat and had an acid reaction, and it did not contain any special features that would lead to the supposition that it came from other gastric organs.

"Granting, then, that it was gastric juice, it follows that secretion, induced by the presence of the beef-tea, was in action, while the balancing power of absorption was held in abeyance. Now, if we follow this out, we shall see that the sympathetic nerve-power was acting regularly; for secretion of gastric juice is governed in the follicles by the latter, while absorption of fluids direct by the veins, which are governed by the former, is held in abeyance, or, in other words, paralyzed. I do not say that it is so; I only throw these facts out for others to corroborate, or not, as the case may be. Whence could the increase in the quantity of fluid have come? It must have been taken in some way from the blood; and what so ready to do so as the gastric follicles, stimulated into action by the presence of the small quantity of beef-tea?

"Now, as to remedies. If my observations be correct, any drug or remedy acting on the sympathetic nervous system would cure this tiresome complaint. Ice to the spine may so act, as well as the remedies mentioned by Mr. Kendall, in a more direct way. The teaspoonful of Worcester sauce, which I have found useful, may owe its efficacy to the hot condiments contained therein, and I imagine it to be possible that they act through the sympathetic in the coats of the stomach. I know that the majority of the quack remedies for sea-sickness contain a mixture of nearly all the carminatives and condiments under the sun, with the hope that one out of the lot will hit, and they do hit, or rather temporarily relieve; as cayenne pepper or Worcester sauce will do. There is one mode of applying remedies that I should like to see tried by some one who would honestly take the matter in hand; and that is, the introduction of certain remedies by subcutaneous injection, for it necessarily follows that, if my idea be correct, and absorption be held in abeyance in the stomach, it is of little use to pour any medicine into that viscus when it is impossible to be taken up by the blood."—*British Medical Journal.*

THE TREATMENT OF HAY FEVER.—Mr. W. F. Phillips, of St. Mary Bourne, Andover, writes:

"It is just over five weeks since a lady placed herself under my care for the treatment of hay-fever, or summer catarrh—a very much better name. She had suffered severely for many years, and sometimes

from the end of May to near the end of July without intermission unless she kept indoors. Her mother, it is worthy of remark, was very sensitive to the odor of certain flowers, and was affected by some of them even to the extent of fainting. She was not subject, however, to summer catarrh.

"Knowing how exceedingly unsatisfactory is the treatment recommended and practiced for this disease, as is sufficiently evident from the recent communications to the *Journal* on the subject, I sought for rational indications that might guide me to the selection of a remedy. I thought of the neurosis that seems to underlie most cases of this kind, and to constitute the essential cause or predisposition on which the disease depends; of the characteristic symptoms of the malady; the injection of the conjunctiva, the hyperæmia and hyperæsthesia of the nasal cavities, the excessive secretion of tears and mucus; and then I bethought me of a drug whose physiological action might indicate the possession of the power to control such symptoms. Belladonna was the drug that suggested itself at once, and I determined to give it a trial, all the more hopefully because I remembered how strikingty useful on similar indications, and by a parity of reasoning, I had often found it in ordinary conjunctivtis and simple catarrh. I began with the following prescription: ℞ Succi belladonnæ ♏xxiv; aquam ad ℥iij. Misce. A teaspoonful to be taken every hour until relief is obtained. The medicine was taken without the production of any undesirable effect, and with very marked advantage indeed—an advantage that became still more evident and unmistakable, both to the patient and myself, when the dose was increased from one minim to one and a quarter (half a drachm in three ounces). Once, too, when the eyelids were especially tender the patient was advised to use the mixture as a lotion to the affected parts, and this local application was found to be a most useful addition to the internal administration of the remedy. Repeatedly, when the symptoms of an attack had been allowed to begin, the patient found prompt relief after a few doses of the drug, the catarrhal affection disappearing first, and then the asthmatic; and on taking it regularly every day after the malady had been subdued, she found to her delight that she can take her walks abroad through blooming grass and flowers without the least protection or precaution—a thing she had not been able to do for years before.

"The patient, remembering no donbt the failure of past treatment, pronounces the remedy "a great success;" but however satisfactory the case may be, it is, as far as I know, a solitary one, and therefore stands in need of confirmation and support."—*British Medical Journal.*

CASE OF COEXISTENCE OF DIPHTHERIA AND TYPHOID FEVER.—Dr. G. Paget, F.R.S., Regius Professor of Physic in the University of Cambridge, describes the following case;

The recent illness of the Postmaster-General may add interest to the following case: The patient was Mrs. J. K., a married woman about 28 years of age, living in Manor Street, Cambridge. Three days before her illness began, one of her children died of diphtheria, two of them having been affected. Mr. Carter, who attended them, had no doubt as to the diagnosis. The children had sore throat, and exudation upon it.

When I first saw Mrs. K. (on December 14, 1861), she had been confined to her bed about a week. From Mr. Carter I learned that her illness had begun with sore throat, and that there had been small white diphtheritic patches upon her throat. When I examined it I could find none, nor any signs of diphtheria: but upon her abdomen were some of the rose-spots characteristic of typhoid fever; and at the base of her right lung, to the extent of two or three inches, the percussion-sound was dull, and small crepitation could be heard. She was feverish; her pulse was 130; her bowels loose. She was in the seventh month of pregnancy.

For six days she continued in much the same state, as an ordinary case of typhoid fever, with moderate pneumonic complications; her bowels loose; her pulse above 120; her tongue dryish; and a general condition requiring wine and brandy. During these six days, her throat remained free from diphtheritic appearances; but on the morning of December 20th it again became sore, and in the evening the uvula and soft palate were covered with a white exudation, the adjacent parts being bright red. Her pulse then became a little less frequent, falling to 116. Chlorate of potash was now prescribed in small frequent doses, and next day tincture of perchloride of iron. On December 28th her urine contained albumen. The exudation, after its reappearance on December 20th, was seen from day to day; it had a diphtheritic character, and was very extensive. It was still present, though somewhat reduced in extent, on January 2nd. When I saw her on January 5th it had been completely cleared off.

Early in January she began to suffer much from retching and vomiting. She was troubled also with cough. The right lung was consolidated at its base, but to a small extent only. The vomiting so persisted from day to day as to bring her into great peril. On January 20th the liquor amnii escaped. Active delirium now came on, and continued for upwards of twelve hours, when she suddenly aborted of a seven-months child, which lived half a day. The mother nearly died during the removal of the placenta, though scarcely any blood was lost. After labor was completed the vomiting ceased, and she gradually recovered.

The chief interest of Mrs. R.'s case is in the disappearance of the local signs of diphtheria, and their suspension for six days during the continuance of the typhoid fever, and then their re-appearance and persistence for thirteen days or more. This appears to me a fact, not perhaps contrary to what might be expected, but at least worth notice. It differs from what was reported in the case of Mr. Fawcett.—*British Medical Journal.*

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, SEPTEMBER 29, 1883.

AMERICAN ACADEMY OF MEDICINE. —The annual meeting of this organization will be held at the New York Academy of Medicine, 12 West 31st street, New York, on Tuesday, October 9 (three o'clock P. M.), and Wednesday, October 10, 1883. The leading objects of this Society are the promotion of the more thorough general education of students before entering upon the study of medicine, and of a more extended and systematic course of medical studies. Only such physicians as are also literary graduates are admitted to membership in the Academy. The coming meeting will doubtless be one of interest. Any further information concerning it may be obtained by addressing the Secretary, Richard J. Dunglison, M.D., Philadelphia.

OPENING OF THE MEDICAL SCHOOLS. — During this week and next, nearly all the medical colleges in this country open the annual courses of instruction for 1883-4. The Chicago Medical College, the Rush, and the College of Physicians and Surgeons, had their regular opening lectures on Tuesday evening, the 25th inst.

Good audiences were present in each college, and the prospect is good for the usual number of students in each during the college terms. At the Chicago Medical, which is the medical department of the Northwestern University, the exercises were opened by Rev. Dr. Cummings, President of the University. This school not only adheres to its strictly graded and extensive curriculum and long term, but has provided a fourth year term for such students as choose to avail themselves of it. And we are glad to say that all the regular medical colleges in the city now require a moderate standard of preliminary education for admission to their halls.

A HINT TO THE DILATORY.—Several members, who read papers in some one of the Sections of the American Medical Association at the recent meeting in Cleveland and which were referred for publication, have not yet placed such papers in the hands either of the permanent Secretary or of the editor of the JOURNAL. They will confer a favor upon themselves as well as upon the readers of the JOURNAL if they will place the papers referred to in the hands of the editor as soon as practicable. If they do not, a late publication will be the fault of no one but themselves.

SIR WILLIAM MACCORMAC.—This distinguished surgeon, of London, has been spending several days in this city, much to the gratification of the local profession, and, we trust, not without genuine pleasure to himself. On Wednesday evening, the 26th inst., he accepted an invitation to meet with and address the Chicago Medical Society in one of the parlors of the Grand Pacific Hotel. At the hour appointed the room was well filled with members of the Society, and Sir William entertained them with a discussion of several important surgical topics illustrating the present status of plastic, abdominal and antiseptic surgery. The chief point he presented in relation to plastic operations was the advantage of raising the flaps intended for use in covering or restoring injured parts, dressing them properly and waiting until their nutrition had become well established (usually from twelve to fourteen days) before molding and attaching them to the parts for which they were intended. In explaining the point he related cases of rhinoplastic operations in which the flaps were taken from the arms of the patients and after the delay necessary for the complete establishment of nutrition through the pedicle, they were fitted to the nasal stump with unusually good results. In the same connection he explained an ingenious and successful mode of covering extrophy of the bladder and affording much relief from the constant dribbling of urine, by using one properly prepared flap from the integument on one side, another from above, and a third from parts below the extruded part of the bladder, making a separate operation for each flap. He did not turn the flaps in such manner as to leave the external surface or skin next to the exposed surface of the bladder, as had been generally practiced, because the hairs

would continue to grow and become the nuclei for the accumulation of calculus deposits and thereby cause much suffering to the patient. In relation to abdominal surgery, he spoke of the comparative safety of opening the peritoneal cavity under judicious antiseptic practice, for the purposes of removing intestinal obstructions, ovarian tumors, and for establishing artificial openings into the stomach through which nourishment may be introduced in cases of occlusion of the œsophagus by malignant diseases or otherwise, or into the intestines for the discharge of fœces when permanent obstruction exists in the lower part of the intestinal canal. The special feature presented and illustrated by the speaker in relation to gastrotomy for the purposes named, was the advantage of making two separate operations for completing each case. The first consisted in the opening of the abdominal cavity, bringing the part of the stomach in which the opening is to be made into contact with the opening through the abdominal wall and retaining it there by sutures passed in such manner as would secure close contact of the peritoneal covering of the stomach with the peritoneum surrounding the incision for a strip at least half an inch in width. Antiseptic dressings are applied, and a delay of fourteen days during which firm adhesions take place between the surfaces held in contact by the sutures, when the opening may be carried into the stomach without the least danger of having its contents escape into the abdominal cavity. In the meantime, the patient is sustained exclusively by nutritive enemas, that the stomach may be kept at rest. After the operation is completed by the opening into the stomach, a tube is inserted and the patient easily fed through it. He related some cases in which this mode of operating had resulted very satisfactorily. In operating for strangulated hernia he advocates the entire removal of the hernial sac after the intestine had been returned in all cases where the sac is small, and the removal of a ring or strip of the sac at the upper part where it is large, which will result in a more complete closure of the opening through the abdominal wall and lessen the danger of subsequent renewal of the hernial protrusion. He also spoke favorably of resorting to the same procedure for the radical cure of bad hernias not strangulated. He unqualifiedly endorsed the Listerian method of antiseptics, saying that if only cleanliness was the desideratum, he knew of no more effectual method of securing it. In conclusion, he expressed the gratification his visit to this country had afforded him, and the cordial relations existing between the profession in this and the Mother Country. These latter sentiments were warmly reciprocated by several members, and a vote of thanks was tendered to Sir William MacCormac for his very interesting address. An informal reception closed the pleasures of the evening.

SOCIETY PROCEEDINGS.

MINUTES OF THE EIGHTH ANNUAL MEETING OF THE AMERICAN GYNÆCOLOGICAL SOCIETY.

The eighth annual meeting of the American Gynæcological Society was held at the Hall of the College of Physicians, Thirteenth and Locust streets, Philadelphia, Tuesday, Wednesday and Thursday, Sept. 18, 19 and 20, 1883.

The morning session was called to order soon after ten o'clock A. M., Gilman Kimball, M.D., of Lowell, Massachusetts, President, in the chair. The other officers of the society were Vice-Presidents Albert H. Smith, M.D., and Theophilus Parvin, M.D., LL.D., both of Philadelphia; Secretary, Frank P. Foster, M.D., of New York; Treasurer, Paul F. Mundé, M.D., of New York, and the other members of the council were Drs. John Byrne, of Brooklyn, New York; Wm. T. Howard, of Baltimore; A. Reeves Jackson, of Chicago. and Henry F. Campbell, of Augusta, Georgia.

The meeting was opened by an address of welcome by Dr. Duer, of Philadelphia; who spoke eloquently of the monument afforded the society by its record of the past, and of the possibilities of the future, and expressed a wish that the present sitting of the society should be like that of a united family, to whom, in the name of the Philadelphia profession, he extended a most hearty welcome.

A most interesting paper by Dr. Joseph Taber Johnson, of Washington, D. C., next followed in the regular order of proceedings, the subject of which was Superinvolution of the Uterus. After speaking of the comparatively common occurrence of the affection, to prove which a number of authorities were quoted, the importance of diagnosing this condition from atresia of the uterus, and from a uterus that had never been developed, was referred to. The author also said that he did not mean a uterus closed by inflammation, but he did mean to designate by the term a retrograde process occurring in the uterus and its appendages; and this retrograde process may obliterate the entire uterus and ovaries.

Four cases were then cited in illustration, in which treatment was attended by poor success, and a history of the want of success in the hands of Sir James Simpson, who first called attention to the disease, was referred to, for the purpose of showing that his results were not exceptional.

Dr. Fordyce Barker, of New York, opened the discussion on Dr. Johnson's paper, by referring, first, to the use of the term superinvolution of the uterus. He thought the term may be used to designate a retrograde process occurring from any cause, as, for example, fibroid tumors; or, again, some cases of acute metritis; second, as to its frequency, it is difficult to say, for the reason that most of these cases are met with in consultation practice. He sees two or three cases a year, and it is his habit to say that he cannot

afford them much benefit; and, in the third place, he bases his decision whether they can be benefited on the following rule, viz: his prognosis is unfavorable when he finds an associated arrest of ovulation, or nearly so. But there are cases associated with very active ovulation, and this class of cases affords encouragement for treatment.

Dr. A. Reeves Jackson, of Chicago, was surprised at the alleged frequency of superinvolution as expressed by Dr. Johnson's paper. He had only seen one case, which was that of a young woman, in which the os was small, and he could detect no ovaries. He introduced a probe for the purpose of exploration, and unfortunately punctured the fundus. Not knowing, at that time, that this had been done without evil results following, the accident became a source of much solicitude, but the puncture produced no untoward consequences. She was afterward treated with a stem pessary, but with no good results. It became a question in his mind whether this was a case of superinvolution, or one of premature change of life.

Dr. Van de Hallan, of Syracuse, New York, called attention to a possible cause of error that was likely to arise in the diagnosis of some cases where the superinvolution is entirely in the cervix, and not in the body of the uterus, and might be due to the surgical condition of a lacerated cervix.

Dr. Battey, of Georgia, was of the opinion that superinvolution is due more to the ovaries than the uterus, and offered in proof the fact that removal of the ovaries will produce it. He thinks that electricity is the best agent for its treatment, which should be passed through the ovaries, rather than through the uterus.

Dr. Byford, of Chicago, said that it was evident that a good deal of confusion exists on the subject of involution. He makes a distinction between superinvolution and atrophy, though the former may be one of the stages of the latter. He regards the condition as one of simple superinvolution, where the uterus alone is concerned, complicated, where the pelvic organs are all concerned. Much of the success of treatment depends upon our ability to diagnose these distinctions, for when the ovaries are affected, he believes it impossible to cure the disease. But when the ovaries remain natural, he believes that it can be cured. He advises a stem pessary, or some other means of producing a local congestion of the uterus by irritation. As to the frequency of superinvolution, he thinks it is not common.

Dr. Campbell, of Georgia, believes it not always necessary that the ovaries should in any way be affected, or atresia of the uterus occur, to account for superinvolution. He related a case of barrenness, where there was distension of the uterus and ovulation. He was called in consultation by a prominent surgeon in regard to a case of tapping, in which he could not say whether the accumulation was in the uterus or the abdomen, which turned out, however, to be a case of twin pregnancy, one healthy, and the other dropsy of the amnion. Premature labor was bronght on, and the first fœtus delivered, after which the second membrane was punctured, resulting in the discharge of several gallons of water. She recovered, but had no children afterward, though she menstruated regularly. In this case, he thinks that the over-distension of the uterus destroyed its muscular structure.

Dr. Johnson closed the discussion, and said that Dr. Barker had very fully covered the subject in his remarks.

The second paper was upon "The Importance of Cleanliness in Surgical Operations," by J. Stansbury Sutton, of Pittsburgh, Pennsylvania. He referred to the fact that wounds the result of accident have always been a study, and the most diverse methods of treatment have prevailed, and gave quite a history of the decadence of literature, and with its attempts to heal by first intention, and the substitution therefor of the method of healing by granulation. Quacks, at this time, were in the habit of approximating the edges of wounds, and their success attracted the attention of the regular profession, resulting in a return to the doctrine of healing by first intention. The cell theory of life resulted in the cell theory of disease. He referred to the great results achieved by the use of the microscope, of the discovery of the two forms of micro-organisms, bacteria and micrococci, and the revolution in surgery by Listerism, the success of which he attributed to the method being both germicide and demanding scrupulous cleanliness. He then spoke of the universal adoption of Listerism, and of the brilliant results achieved by it. But micrococci have been detected under Lister's dressing where the wound healed as well, and micrococci will live for some time in a 5 per cent. solution of carbolic acid. Whence, then, the success of Listerism? It had been attributed to carbolic acid, but Von Brun, Tait, and others had discarded the spray with even better results than before. He was of the opinion that it was the cleanliness, rather than the carbolic acid, that gave to Listerism its success. The author formulated three principles that may be applied to Listerism, as follows:

1st. All germs are not dangerous.

2d. A 5 per cent. solution of carbolic acid will not kill all germs.

3d. The antiseptic treatment of wounds, as taught by Lister, admits of modification.

Bacteria swarm at the orifices of the body, but do no harm in rectal and vaginal surgery. Thinks other antiseptics better than carbolic acid, especially iodoform, which has superseded it greatly in Vienna. As long as there are germs that are noxious, he believes in excluding all germs on that account. He accords to Lister the credit of being a great benefactor to humanity, as he has taught cleanliness in surgery.

The author then went on to relate his observations among the great surgeons abroad, and the methods pursued by them, and compared their successes, giving his opinion with regard to how the various degrees of success, as represented by published statistics, were attained. He thought the spray might be dispensed with.

Dr. Thomas Addis Emmet, of New York, said that he agreed with the opinions expressed by Dr. Sutton in his paper most thoroughly. He had long ago said that the death warrant of many a patient has been

carried under the finger-nails of the operator. He relies more on soap and water than disinfectants.

Dr. Lusk, of New York, was in favor of Listerism and the use of the spray. Though carbolic acid does not kill the micrococci, it does kill the germs of putrefaction, and greater cleanliness can be secured in the hands of surgeons at large by Listerism than without it. And in vaginal and rectal surgery, he is of the opinion that the best success can be secured if every process of cleanliness is observed. In the hands of such men as Tait, such perfect cleanliness was possible as to make the use of Listerism unnecessary, but these instances were exceptional, and success is possible with carbolic acid where the surroundings are of a nature precluding the possibility of obtaining pure air.

Dr. Wilson, of Baltimore, thoroughly endorsed Dr. Sutton's paper with regard to the importance of cleanliness in surgery, but thinks we owe Lister a debt of gratitude which we will be long in paying.

Dr. Campbell, of Georgia, in a witty speech, said that he did not think it right to attribute all cleanliness in surgery to Lister, for a great many surgeons were cleanly before Lister was ever heard of.

Dr. Sutton closed the discussion by saying that as great success had been attained without Listerism as with it; that Tait uses no carbolic acid, preferring boiling water as an antiseptic instead, and that the day of the spray in surgery has gone. He has no faith in statistics, owing to the difference in cases in the hands of various surgeons.

The session then adjourned, and a lunch was served in the room below to the members and invited guests.

AFTERNOON SESSION.

The afternoon session of the American Gynæcological Society was opened at three o'clock by a paper which was left over from the morning session. Dr. Albert H. Smith, of Philadelphia, was the author, and the subject was, Hot Water in Secondary Hæmorrhage After Pelvic Operations. He uses it to control excessive vascular action, and also as a prophylactic against hæmorrhage and septic absorption. When applied, it is injected into the vagina and cervix uteri in large quantity, and at a temperature of 115° to 120° F., until all clots were broken up and the water comes away without stain. He wishes to call especial attention to the value of hot water in surgical operations, especially plastic operations, and its great worth in secondary hæmorrhage.

Dr. Reamy, of Cincinnati, endorsed Dr. Smith's opinion as to the value of hot water as a hæmostatic, and has been in the habit of employing hot water in place of sponges in certain surgical operations.

Dr. Wilson, of Baltimore, thinks hot water is invaluable, and related a case of serious hæmorrhage after ovariotomy where a life was saved by it.

Dr. Campbell, of Georgia, recommends the use of hot water, and spoke of the value of tr. iodine in arresting hæmorrhages.

Dr. Mann, of Buffalo, related a case of cancer of the uterus, where hot water failed to check the hæmorrhage. He injected vinegar after the operation, and the parts appeared white and bloodless, Seeing a small piece of diseased surface, he snipped it off with the scissors. Instantly a terrible hæmorrhage occurred, which vinegar would not stop, and hot water had no effect. He tamponed it to no purpose; the actual cautery checked it a little, but did not stop it; packing with Monsell's salt was useless, and the woman died in ten minutes.

Dr. Goodell, of Philadelphia, thought that Dr. Mann asked too much of the hot water; believes it to be of advantage in oozing, but it sometimes fails. It is his opinion that hot water acts beyond the tissues which it touches, and arrests by increasing the crontractility of the deeper parts. He is in the habit of using vinegar as a hæmostatic, but vinegar will not do this. Vinegar acts locally. He considers hot vinegar as the best hæmostatic, as it produces both the effect of vinegar and hot water.

Dr. Barker called attention to an important point with regard to the use of hot water as a hæmostatic, and that is that it sometimes takes fifteen or twenty minutes to produce its effects, and we are liable to be caught, when the loss of even an ounce of blood may be very dangerous.

Prof. Byford, of Chicago, spoke in favor of hot water as a hæmostatic, and in support of Dr. Smith's paper.

Dr. Campbell, of Georgia, made the point that post partem hœmorrhage only requires an irritant for the purpose of making the womb contract, and a number of agents are capable of doing this; but other cases require a different kind of treatment—such as cancerous vessels, for example.

Dr. Smith closed the discussion by saying that he was glad that although there seems to be some opposition to the view expressed in his paper, that even in the great experience of those who had taken part in the discussion, they all concurred in his support, and were able to give but few cases of failure.

The next paper was by Dr. C. D. Palmer, of Cincinnati. His subject was, "Some Points connected with the Subject of Dysmenorrhœa." He spoke of the diverse opinions with regard to dysmenorrhœa, and our want of knowledge concerning its cause. The mechanical theory was described, and the remedy —dilatation of the uterine canal—referred to. He was of the opinion that the obstruction theory is true in a certain proportion of cases, and that the obstruction most frequently existed at the external os. But there is another and more important cause, in his estimation, and he believes that the far greater proportion of cases are neurotic in their character. The extreme sensativeness of the uterus in such cases is well known. There is hyperæsthesia of the nerves, and great vascular tension at such times, and any local irritant may cause pain by exciting morbid contractions. He believes that the mechanical cause of dysmenorrhœa is rare, the neurotic frequent.

With regard to the treatment, the author recommended that it should be as a rule confined to constitutional measures in unmarried women, and advised the use of iron in the form of the dried sulphate, when the flow is of a light color. When the flow is free, too long or too frequent, arsenic was the remedy to be used. Measures should be taken to improve the general health.

Electricity was also recommended; the constant current he found best. It should be applied to the hypogastric, sacral and lumbar regions, and used in cases purely neurotic in their character.

Fenner's tincture has obtained some reputation in the treatment of dysmenorrhœa. It is a preparation of mercury and guiac, but he has found mercury and iodide of potassium more serviceable.

Tr. cimicifuga had been employed by him with success, given in divided doses three days before the monthly period. Tr. pulsatilla was of service applied in the same way. Condemns the use of neurotics. Dilitation only contraindicated in certain cases, and proves of much value in the treatment. Thinks its virtues due to the following reasons: 1st. The sensibility of the nerves is blunted by it. 2d. The irritable fibers of the internal sphinxter are stretched. Dilatation may be performed by graduated bougies or sounds.

The author spoke of the importance of the various stenoses, and says that it is impossible to have sterility for several years without uterine diseases resulting. Thinks incision as a therapeutic measure has been overrated, though it is to be recommended in certain cases, and thinks the results attained are better than those from dilatation.

Dr. Chadwick, of Boston, said that the paper takes very much the same ground as he does, and as he teaches, except that he prefers stretching the external os to incision. He regards the pain as from either local or constitutional cause. Local pain is due to irritation, as in fissures. But he finds very many cases due to a neurotic origin, and asserts that a local cause is unnecessary. In the treatment of neurotic cases he uses the bromides, before the menstrual period, and during the period coca and bromide of ammonium.

Dr. Barker thinks that in no cases is an accurate diagnosis more important than in dysmenorrhœa. He thinks obstruction the cause in only a certain proportion of cases. It is his opinion that the pain is due to two causes, one of which may be referred to the uterus itself, the other to the ovaries. In the treatment of dysmenorrhœa he uses lactate of iron three to five grains, associated with chlorate of potash and given three times a day ten days prior to the menstrual periods. Apiol has given him great satisfaction. It should be given two days before the period is expected to occur. In cases of ovarian exeitement, which is characterized by plethora, flushed face, pain in back and breasts, he employs the bromides, given three or four days or a week before the periods, taken at bed-time. Apiol also proves especially valuable in these cases.

The remainder of the discussion of this valuable paper was postponed until the end of the meeting, on account of the lateness of the hour.

Adjournment of the afternoon session.

SECOND DAY—WEDNESDAY, SEPT. 19.

The morning session was called to order at the usual time by the president, Dr. Gilman Kimball, of Lowell, Mass., who followed with the President's Address.

The subject chosen by Dr. Kimball for his address was A Biographical Sketch of Dr. Nathan Smith, Founder of the Dartmouth Medical College. He thinks that Dr. Nathan Smith has done more for the advancement of medicine and surgery in the United States than any single man in its history. He was also the second to perform a successful ovariotomy in this country, and did it without knowledge of Dr. McDowell's operation performed prior thereto.

Dr. Smith was born in 1762. In youth he was a farmer's lad, and the opportunities he had for an early education were those of a district school, and the opportunities afforded him by teaching. At twenty he was so strongly impressed by a surgical operation that he witnessed as to influence him to study medicine. Under advice, he commenced preliminary studies with this end in view. In 1787, when twenty-five years of age, he commenced the practice of medicine in Cornish, Conn., without a diploma. Finding the necessity for more education, he attended Harvard Medical School, from which he obtained the degree of M.D. in 1790. In 1797 he again abandoned the practice of his profession and went to Glasgow to study, after which he spent four months in the London hospitals. Prior thereto he had determined to found a medical school at Dartmouth, and on his return was appointed Professor of Anatomy, Chemistry, and the Theory and Practice of Medicine in that institution. In 1803 the legislature of New Hampshire voted an appropriation for that purpose, and the Medical School of New Hampshire was founded. In 1812 Yale established a medical department, and Nathan Smith was selected to organize it. He resigned from Dartmouth in 1814. In 1821 he was called upon to organize a medical department at Bowdoin College. He also lectured in the University of Vermont. But he had taken upon himself too much, and the inevitable end followed. His death occurred in January, 1829. As a physician he was fifty years ahead of his time; as a surgeon he manifested great talent and success, and as a man he was eminent for his many virtues.

Dr. S. D. Gross, of Philadelphia, in commenting on the paper said that he thought it strange that Dr. Smith was not aware of Dr. McDowell's prior ovariotomy, performed thirteen years before, which was published, and that if he had known it he would have given him due credit in his writing upon the subject. He considered Dr. Smith's greatest achievement the founding of Dr. N. R. Smith, of Baltimore.

Dr. Kimball made answer to the effect that Dr. McDowell's case was not published until nine years after the operation, and information had not the facilities for travel in those days that it has now.

The next paper was by Dr. Thaddeus A. Reamy, of Cincinnati, on the subject of "A Rare Form of Abdominal Tumor—Three Cases." The cases described were instances of sanguineous tumor of the omentum, which is of rare occurrence.

The paper was discussed by Drs. Lee, of New York, Sutton, of Pittsburgh, and Campbell, of Georgia, who all supported the author as to the rarity of tumors of this kind.

A very interesting paper on the subject of "Con-

genital Fissure of the Female Urethra, with Extrophy of the Bladder," was then presented by Dr. Henry F. Campbell, of Georgia, which was discussed by Dr. Browne, of Baltimore, and Dr. Mann, of Buffalo.

Dr. Edward W. Jenks, of Chicago, being detained, his paper on the subject of "A New Method of Operating for Fistula in Ano," was read by title.

Dr. Thomas Addis Emmet, of New York, then followed with a paper of great interest, entitled "A Study of the Ætiology of Perineal Laceration, With a New Method of Its Proper Repair." He believes that a simple laceration of the perinæum does not cause the trouble usually attributed to it, and thinks the symptoms usually described must be due to some other cause. Able arguments were brought forward to prove it. The ordinary operation for laceration of the perinæum does not relieve the symptoms unless part of the posterior wall of the vagina is included in the operation. The rupture itself occurs before the fourchette is put on the stretch, and shows how little is the use of supporting the perinæum. It also demonstrates the value of Goodell's suggestion relative to supporting the head as it comes down with two fingers in the rectum. He related a case where all the symptoms commonly referred to laceration of the perinæum occurred without laceration, the cause being a relaxed vaginal wall, which being sewed up, the symptoms all disappeared. Dr. Emmet then described his operation at length, which consists in shortening up the vaginal canal by duplicating a fold of the posterior wall upon itself. A small surface is denuded at the entrance of the vagina, and another a little way up the tube, the two surfaces approximated, and joined with sutures. The success of the operation is due to the part played by the deeper pelvic fascia in the support of the uterus, and the efficiency of the operation in securing this support. He says that the sulci on each side of the vagina support the uterus in the same manner that his suspenders do his breeches, and if you will bring them up, then the organ will be supported. He was of the opinion that there is no such a thing, in reality, as the perineal body.

Dr. Reamy said that he could not see why lifting up a split perinæum will secure the support Dr. Emmet claims for it, and was of the opinion that, to carry out the illustration used by the author of the paper, it was like attempting to support a split pair of pants without sewing up the rent. He also criticized the cavity left by folding the posterior wall upon itself, and suggested the denudation of all the tissues to prevent it. Thinks the operation applicable only to a certain proportion of cases.

Dr. Frank P. Foster, of New York, said that he wished to put himself on record even more radically than Dr. Emmet, for, in his opinion, the perinæum has nothing whatever to do with the support of the organs above it. Don't think there is any such thing in anatomy, as an organ resting on organs below it. But it does not prove that the perinæum has no function.

Dr. Sutton hoped that he misunderstood Dr. Emmet when he said there is no such thing as the perineal body. When it is split, the transverse perineal muscles pull the labia asunder, and take away the support of the organs above it. This is the old theory, and he believes it correct. Dr. Sutton went into a long discussion on this and other points in the paper.

Dr. Emmet closed the discussion at some length, in which he stated that he does not deny the existence of a perinæum, but denies its importance as a support, and that his operation has nothing to do with the perinæum, but with reducing the size of the vagina after childbirth, when it is too large and ceases to perform its part in the support of the organs above it.

Dr. Charles Carroll Lee, of New York, then read a paper on "The Management of Accidental Puncture and Other Injuries of the Gravid Uterus as a Complication of Laparotomy." He quoted seven cases where the gravid uterus had been wounded during operations which afforded evidence to support his view that wounding the uterus does not necessarily produce abortion unless the fœtus or its membranes are injured.

The paper was discussed by Drs. Wilson, of Baltimore, Garrigues, of New York, and Byford, of Chicago. The latter gentleman said that hitherto he had considered it a proper proceeding in case of injury to the uterus during operations to open and evacuate its contents, but Dr. Lee's cases had proved it unnecessary. He was disposed to formulate the rule that in cases of three months pregnancy it would be proper to sew up the wound in the uterus, whether the placenta was wounded or not; and in cases where pregnancy had existed seven or eight months it would be better to open the uterus and evacuate its contents.

Dr. Lee, in closing the discussion, said that he agreed with Dr. Byford in his formulation of principles.

The next paper was by Dr. A. Reeves Jackson, of Chicago, on the subject, "Is Extirpation of the Cancerous Uterus a Justifiable Operation?" He said that the purpose of any therapeutic measure was to save life and relieve suffering, and the justifiableness of any operation must be submitted to this test. Statistics were then cited to prove the terrible mortality of the operation for the extirpation of cancerous uterus, and to show that suffering is not relieved by it. Submitted to his test, he found that the operation was not justifiable.

Dr. Van de Walker, of Syracuse, said that he takes the same ground as Dr. Jackson; that the operation itself originated in the very hopelessness of the cases, and that it makes but little difference how you attack it, little can be done to arrest the disease. He had been more successful in cauterizing with a saturated solution of chloride of zinc, getting out an entire slough of the uterus itself. He protects the vagina with a pomade of vaseline and soda.

Dr. Emmet had opposed the operation from the beginning, and for very similar reasons as given in Dr. Jackson's paper. If the operation is ever to be done, it should be by the vagina.

Dr. Baker, of Boston, then described a method of operating that he had adopted in such cases, and which he had devised. It is a modification of the operations of Simms and Schrader, and by it he is ena-

bled to remove not only the neck, but nearly the entire internal uterus without opening either the bladder or peritonæum. After the operation with the knife, he applies red heat with the thermo-cautery. Has operated at least thirty times without a single death, and can at present call to mind six cases of at least five years' standing who are apparently well.

Dr. C. D. Palmer, of Cincinnati, said that in his opinion, the cases can be divided into two classes—justifiable, in cases where extirpation of the cervix was sufficient to remove the diseased tissue; unjustifiable, when demanding the extirpation of the entire uterine body.

Dr. Sutton had had five cases, but his results were not very satisfactory. Has recently seen Salvader and Martin operate, and they are going on with the operation. Does not think we are going about it in the right way in this country. Went on at length to give his experience with surgeons abroad.

Dr. Jackson closed the discussion by saying that Dr. Baker did not agree with him, for which he was sorry, but he agrees with Dr. Baker, for which he is glad. Martin, he said, kills fifty per cent., and he didn't think that any one in the hearing of his voice would wish a dear friend to go through the operation.

Dr. Sutton interrupted to say that if his own wife or sister should have cancer of the uterus, he would take her to Salvader to operate.

Dr. Jackson advised him not to tell his wife that.

THIRD DAY—THURSDAY, SEPT. 20.

Business meeting at 9 o'clock in the morning, with closed doors. Report of the Treasurer and Auditing Committee. Action on proposed amendments of the Constitution and By-Laws. Election of officers for 1883-'84 Nominations for honorary and active fellowships by the Council. Balloting for the same. Report of the Committee on Publication. Adjournment of the business meeting at twelve o'clock.

Officers for the following year:

President, Dr. Albert H. Smith, of Philadelphia; Vice-Presidents, Dr. James R. Chadwick, of Boston, and Dr. Samuel C. Busey, of Washington; Secretary, Dr. Frank P. Foster, of New York; Treasurer, Dr. M. D. Mann, of Buffalo.

Other members of the Council: Drs. T. G. Thomas and Fordyce Barker, of New York; Dr. Thaddeus A. Reamy, of Cincinnati; and Dr. R. Stansbury Sutton, of Pittsburgh.

The lateness of the hour prevented anything more for the morning than the reading of Dr. Campbell's paper on "Menstruation After Extirpation of the Ovaries." The points of his paper were contained in the questions, "Why does menstruation occur in some cases after the ovaries are removed?" and, "May it not be attributed to cerebro-spinal influence?"

The subject was ably discussed by Drs. Goodell, Emmet and Garrigues of New York, T. G. Thomas, Byford and Mann of Buffalo. One or two instances of the existence of a third ovary were related, which would account for menstruation after an apparent extirpation of both ovaries; and the difficulty in operating of removing all of the ovarian stroma was referred to as accounting for it in some cases.

AFTERNOON SESSION AT 3 O'CLOCK.

Dr. William H. Byford, of Chicago, read an exceedingly valuable paper entitled "Remarks on Chronic Abscess of the Pelvis." He described the different locations of the pus in pelvic abscesses, and the best methods of its evacuation, and also referred to the changes in the lining membrane of abscesses as an important point with regard to treatment. His investigations had led him to believe that the internal surface of an abscess is the same as an external ulcer and liable to similar changes.

The paper was discussed by Drs. Thomas, Goodell, Sutton and Campbell, and much interesting information was elicited.

The final paper was read by Dr. George J. Engleman, of St. Louis, entitled "Ergot; the Use and Abuse of this Dangerous Drug." He was of the opinion that ergot should never be used in treating the gravid uterus, for there are other safer and surer means that can be employed. The paper called forth a very animated discussion from Drs. Johnson, Campbell, A. H. Smith, and Elwood Wilson, in which the most opposite views were expressed.

The time being now far spent, Dr. James R. Chadwick's paper, entitled "A Theory to Explain the Relaxation of the Vagina and Perinæum during Labor," was read by title. This is to be regretted, as the paper promised to be particularly interesting after that of Dr. Emmet and the discussion it called forth. But the author had returned to Boston, and the time for adjournment had nearly arrived.

With the permission of Dr. Campbell, the "Discussion on Death after Labor," to be opened by him, was not entered into, and the few minutes remaining were offered to Dr. Palmer to close the discussion on his interesting pâper on Dysmenorrhœa, read the first day. He declined, however, because of the lateness of the hour.

The new president, Dr. Albert H. Smith, of Philadelphia, was then introduced, and responded by a short and appropriate, but informal address, thanking the Society for the high honor conferred upon him, and expressing his hope for a successful meeting in Chicago next year.

NINTH ANNUAL CONVENTION OF THE TRI-STATE MEDICAL ASSOCIATION, HELD IN ENGLISH'S HALL, INDIANAPOLIS, SEPTEMBER 18, 19, 20, 1883.

The meeting was called to order at 10 A. M. of the 18th, by the Chairman of the Committee on Programme, Dr. J. L. Thompson, of Indianapolis, after which the President, Dr. William Porter, of St Louis, took the chair, and Dr. G. W. Burton, of Indiana, officiated as Secretary. After a formal address of welcome by the Governor of the State of Indiana, followed by a brief address by Dr. J. L. Thompson and a business report from the Secretary, the Society took up its regular order of business, namely, the reading and consideration of papers. The first paper read was on "Phlebitis," by Dr. H. C. Fairbrother,

of East St. Louis, Illinois, and was listened to with attention. Dr. Ap. Morgan Vance, of Louisville, read a paper on the "Treatment of Compound Fractures."

Dr. Vance said that it is his practice to dress compound fractures as he would simple fractures in the same location, using the fixed dressing—plaster of Paris—entirely, and trusting to the thermometer to tell if the case will go through as a simple or compound fracture. He said that he used no antiseptic dressing, as he expected the blood to seal and protect the wound better than anything else. Some absorbent substance should be used about the wound—oakum, or, what is now better, absorbent cotton. Some hæmorrhage will almost always occur when reaction is established. This purges the wound, and it heals under the scab, cotton and blood. Fever of 101½° to 102½° that cannot be otherwise accounted for, indicates investigation, but there should not be too much haste in opening the dressing, especially if the rise of temperature occurs within the first 48 hours. In this case, a mercurial should be given, followed by quinia. Should it occur suddenly, during the latter part of the third day and up to the fifth or sixth day, open the dressing and give good drainage to the pus. In very hot weather, when the wound is large, the use of ice-bags or ice-coils will increase the chances of success. In cases where the bone has made the compound, greater success may be expected, as the opening is almost necessarily valvular. The dsscussion of the subject closed the morning session.

AFTERNOON SESSION, TUESDAY.

A paper on "Nerve-Stretching" was read by Dr. N. J. B. Wright, of Olney, Illinois. He had taken much pains to collect reports of cases from members of the profession. The most important items in the paper, and elicited in the discussion to which it gave rise, are reported as follows:

In sciatica, nerve-stretching was productive of good results. Eight cases were reported, and of these five were cured; two died of cancer. Dr. Wright operated on a laborer, aged 48 years, who had been treated by intelligent physicians with the usual methods—drugs and electricity. He was on crutches, and was first subjected to a full line of treatment, which apparently completely cured him. The trouble returned; the nerve was stretched; pus formed; the inflammation was excessive; from the time of the stretching—eleven months—to the present, the patient has been completely cured of sciatica, and is now a vigorous laboring man.

Dr. W. A. Byrd, of Quincy, Illinois, reported a case of nerve-stretching, cutting just where the nerve emerges from the sciatic notch, resulting in a perfect cure.

Dr. R. Houghton, of Indianapolis, discussed the pathology of nerve-stretching, holding that the molecular condition of the nerve-trunk was interfered with.

Dr. Myers, of Fort Wayne, held that the nature of pain is the basis from which theories of cure by nerve-stretching are developed.

Dr. Wright closed the discussion, looking upon nerve-stretching as an empirical method of cure, but as long as it was a safe procedure for cure of sciatica, and usually successful, the profession was justified in resorting to it. He did not agree with the theories proposed in the discussson as to the cause of sciatica, and said: "The operation was productive of good in only two of fourteen acute cases. The nerves of the upper extremities were stretched in the acute cases, and of the lower extremities in the chronic. The procedure had no effect on a case of fourteen years' standing, this being the only one of eight chronic cases in which the operation was a complete failure. The result in the case of sciatica following spinal meningitis is set down as only a slight improvement. Five chronic cases cured were of sciatica. No unpleasant effects are reported as following the operation, except that performed by ourselves. This is reassuring, and takes away from the operation the phantom of danger that has caused anxious physicians to withhold the knife, allowing their patient to suffer through months and even years. It adds another justifiable recourse to the way with which we have been fighting neuralgia, especially of the sciatic nerves."

The next paper was entitled "Suggestions as to the Pathology and Treatment of Pneumonia," by Dr. E. F. Wells, of Minster, Ohio. Dr. Wells not being present the paper was read by Dr. W. A. Byrd, of Quincy. At the close of the reading it was remarked by Dr. Fields, that the paper furnished nothing new concerning either the pathology or the treatment of the disease under consideration.

Dr. W. S. Haymond, of Indianapolis, presented a well-written paper detailing the operation for removing portions of the frontal bone which had been fractured eighteen years before. The two tables of the skull were united by inflammation and the bones ulcerated nearly through to the brain. The decayed portions of the skull were removed, and the patient rapidly recovered.

Following the remarks of Dr. Haymond, a number of the members of the Association detailed their experiences in cases of some similarity, and the discussion turned upon the effects of trephining in epilepsy, which was believed would, in most cases, be productive of good results.

A paper which elicited much interest was read during the afternoon session by Dr. J. E. Link, of Terra Haute, on "The use of the Roller Bandage" as a treatment to repress abscesses and erysipelas, and especially for the dressing of stumps after amputation. Dr. Link used only several layers of old sheeting wrapped successively about the stump, which was left open for ample drainage. In 200 amputations by the doctor, commencing as an army surgeon in the late war, not a patient had died from the amputation or had suffered pain after the operation. He used no antiseptics, pus never formed in the stumps, and there was no after-pain. Dr. Link presented a young man whose arm he had amputated on Sept. 5, and who is now nearly well. He said he had suffered no pain since the operation. Other patients were presented and the doctor's method of bandaging was closely observed. The bandage, he said, is not to be removed until the wound is healed. New bandages are put on over the old ones each day as the muscles

shrink. Dr. Gross, of Philadelphia, speaks highly of Dr. Link's method, which has proved painless, efficient and original.

The discussion on this paper closed the afternoon session.

EVENING SESSION—TUESDAY.

Immediately after the assembling of the members in the evening the president, Dr. Wm. Porter, of St. Louis, delivered his address which is given in full in another part of this number of the JOURNAL. After the address, an interesting case of "Myelitis due to Arsenical Poisoning" was reported by Dr. A. W. Prayton, of Indianapolis. The patient was reported to have taken an *ounce* of arsenic, and yet recovered without any antidotal treatment; but with paralysis of the extremities and temporary impairment of the mental faculties.

The next paper was on "Syphilitic Interstitial Keratitis" by Dr. H. M. Post, of St. Louis, Mo.

Dr. R. E. Houghton, of Indianapolis, read a paper on "Relative Value of Resections and Amputations." His conclusions were as follows: (1) no excision should be made in aged persons; (2) no excision should be made in very young persons; (3) no excision should be made if there is even a suspicion, much less evidence of the existence of phthisis or other constitutional diseases; (4) no excision should be made in acute disease or injury; (5) excision may be made in cases where it is the hand, or foot or limb to be saved and which is of more than common value to the patient, hence the elbow and knee-joints may be excised under proper considerations; (6) the shoulder and hip-joints may be excised when it is a greater mutilation and a greater loss to lose the limb by amputation, and the patient has equally good chances for recovery of the excision as after amputation, which is rarely possible; (7) excisions are not to be made in cases of malignant diseases of the articular ends of bones or other parts of bones; (8) excisions should not be made for acute abscess in the knee-joint, and most likely not in any case of acute abscess; (9) excisions of joints generally are seven times more fatal than amputations under the same circumstances and in the same class of cases; (10) no surgeon is justifiable in subjecting his patient to excision, in view of all the facts made known, unless there are good and substantial reasons for assuming the greater risks for his patient.

The reading of Dr. Houghton's paper was followed by an earnest discussion, participated in by several members. The Society then adjourned until the next morning.

WEDNESDAY—MORNING, AFTERNOON AND EVENING SESSIONS.

The proceedings opened by the reading of a paper on "The Physiology of the Brain in Relatian to Insanity," by Dr. N. Field, of Jeffersonville, which excited a general discussion. It was followed by a paper on "Insanity" by Dr. Hay, of Chicago. Dr. N. D. Gaddy, of Lovette, Ind., presented a paper on "Heredity." "Some Mental Problems in Questions of Medical Jurisprudence" was the subject of a paper presented by Dr. C. G. Comegys, of Cincinnati. At the afternoon session the special committee to which was referred the president's annual address submitted their report, recommending the change of the name of the organization from the Tri-State Medical Society to the Medical Society of the Mississippi Valley, thus taking in the entire country from Canada to the Gulf of Mexico, and from the Allegheny to the Rocky Mountains. All local societies within this territory are to be considered as affiliated bodies, and shall be requested to send delegates. The committee further recommended the reduction of the membership fee from $3 to $2, which, however, was not adopted. Dr. Edward Bock, of St. Louis, in a paper giving "Observations on Sponge Grafting," detailed cases illustrating his method. Dr. Bock said that sponges for grafting must not be overlined thick, and the thin layer must not be removed until healthy skin is formed. "Naso-Pharyngeal Catarrh" was the title of a paper read by Dr. A. B. Thrasher, of Cincinnati, giving the causes of catarrh, and the different methods of treatment now in use. The same treatment, however, he said, could not be applied to all persons, and each case should be made a special study. Dr. H. H. Mudd, of St. Louis, presented a paper on the subject of "Stone in the Bladder," and Dr. Louis D. Bronze, of Evansville, read a paper on "Tuberculosis, as Produced by the Inhalation of Sprayed Sputum," giving fifteen cases in illustration of the subject. In the evening papers were read by Drs. George Hally, of Kansas City, J. W. Matthew, of Louisville, Ky., and J. R. Mean, of St. Louis.

During the evening session the Society elected the following officers: President—Dr. B. M. Griffiths, Springfield, Ill. Vice-Presidents—J. W. Matthews, Louisville, Ky.; C. G. Commegys, Cincinnati; J. E. Link, Terre Haute. Secretary—G. W. Burton, Mitchell, Ind. Treasurer—F. W. Beard, Vincennes. Chairman of the Committee of Arrangements—F. L. Matthews, Springfield, Ill. Chairman of the Committee on Programme—Charles D. Pearson, Indianapolis.

The next meeting will be held at Springfield, Ill.

The Society adjourned to the following morning.

THURSDAY—THIRD DAY—MORNING SESSION.

The third morning session opened under the new name of the Medical Society of the Mississippi Valley. The first paper read was on "Tait's Operation," by Dr. Thomas B. Harvey, of Indianapolis; and the second was on "Tait's Modification of Batty's Operation," by Dr. William A. Byrd, of Quincy, Ill. Dr. J. Lutzie, of Richmond, Ind., followed with the report of a case of prolapse of the left ovary, on account of which Batty's operation was performed, resulting in the death of the patient.

The morning session closed with the reading of a paper on "What is the Proper Management of a Child during the First Seventy Hours Post-Uterine Existence?" by Dr. J. F. Hibberd, of Richmond, in which he stated that the custom of dosing infants and wrapping them in tight bandages is highly injurious. So far as prudent he thought that nature should be let alone. The paper was generally indorsed.

AFTERNOON SESSION.

The seventh session was held in the amusement hall of the Insane Asylum. Some fifty members were present. The hall was elegantly decorated with ferns, flags and flowers, and every effort made by the medical staff of the hospital to make the meeting a pleasant one.

Dr. G. V. Woolen, of Indianapolis, read a paper on "The Beneficial Effects of Chloroform in Parturition," holding that it is desirable in many cases to carry the patient to full anæsthesia. This position was dissented from by several of the members, some of whom would use ether in preference to chloroform.

Dr. W. H. Myers, of Fort Wayne, read his views on "Tracheotomy," with reports of cases under his care, and stated his belief that in cases of obstruction of the trachea, it is the duty of the physician to immediately cut open the tube and remove the foreign body. The discussion of Dr. Myers' paper was deferred until the evening meeting, that members might visit the wards of the asylum. This was done by many, and the wards, containing a total of 621 men and 477 women, were found in the best condition, neat and clean, well-ordered and comfortable. Dr. Fletcher explained that the women's department, which at present has beds and accommodations for but 450 patients, is at present overcrowded.

EVENING SESSION.

There was a full attendance for a closing session, and the earnest work which has characterized all the meetings was continued until the set programme was finished.

After discussion of Dr. Myers' paper, Dr. S. J. Jones, of Chicago, read a paper on the "Influence of Errors of Refraction and Defects of Accommodation of the Eye," which was discussed by Drs. J. L. Thompson, Dudley S. Reynolds, of Louisville, Dr. Newcomer and others, developing the dangers of indiscriminate selection of spectacles made of poor glass, and not adapted to the eyes of those using them. Only oculists should fit glasses to those needing them.

Dr. Jones also read by title a "Plea for Early and More Thorough Treatment of the Ear."

Dr. John Chambers, of Indianapolis, not being present, his paper on the "Treatment of Pleuritic Effusions" was referred, without reading, much to the regret of the Society. The President-elect, B. M. Griffith, of Springfield, Illinois, was introduced by the retiring President, Dr. William Porter, of St. Louis. Dr. Griffith assured them of a cordial reception and ample accommodations at the Springfield meeting, to be held in September, 1884. After a vote of thanks to the officers, the ninth and most successful meeting of the Tri-State Society adjourned.

It will be seen that the Society devoted its entire time to the reading and discussion of papers and the transaction of necessary business, holding three sessions each day. It will be seen that of the fifty-three papers, the titles of which were entered upon the printed programme, twenty-eight are mentioned as read and considered during the several sessions.

DOMESTIC CORRESPONDENCE.

HAMMOND, WIS., AUG. 15, 1883.

TO THE EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

The Northwestern Inter-State Medical Association held its first annual meeting in Hudson, St. Croix Co., Wisconsin, August 7. A fair attendance was noted, several papers of merit read, and discussions of interest ensued. The annual election resulted as follows: President, Dr. Chas. Alexander, of Eau Claire; 1st Vice-President, Otis Hoyt, Hudson; 2d Vice-President, S. S. Riddell, of Chippewa Falls; Secretary and Treasurer, J. F. Boker, of Hudson; Censor for three years, E. L. Boothby, Hammond.

The next meeting will be held in the city of Eau Claire, Wisconsin, on the first Tuesday in December.

This Society meets three times yearly; was organized in August, 1882, and embraces sixteen counties in Wisconsin and Minnesota. Efforts will be made this winter to incorporate it by special statute, and do away with the county societies. It bids fair to become a large and important organization.

Respectfully,

E. L. BOOTHBY.

FALLS CITY, NEB., SEPT. 23, 1883.

N. S. DAVIS, M.D.

I notice that in THE JOURNAL of August 18, 1883, Dr. Bénj. F. Bache is given the credit of first using heat as a disinfectant. If my memory serves me correctly, Dr. Henry, of Manchester, England, in 1824, used it to destroy the contagious property of small-pox, vaccine virus, typhus and scarlet fever; and in 1851, Dr. Van Busch, of Berlin, made a trial of the same agent in a large lying-in hospital, in the wards of which puerperal fever had been very destructive, and obtained most favorable results.

Did Dr. Bache's experiment occur before the above dates?

Very respectfully,

EUGENE L. FRIDENBERG, PH.G., M.D.

BOOKS RECEIVED.

Insanity. By E. C. Spitzka. Birmingham & Co. New York.

A Complete Handbook of Treatment. By Wm. Aitkens. Birmingham & Co. New York.

A Practical Manual of the Diseases of Children. By Edward Ellis, M.D. Birmingham & Co. New York.

Diagnosis and Treatment of Diseases of the Ear. By O. D. Pomeroy. Birmingham & Co. New York.

Hewitt's Diseases of Women. Edited by H. Marion Sims. Birmingham & Co. New York.

Encyclopædic Index of Medicine and Surgery. Edited by E. J. Birmingham. Birmingham & Co. New York.

MISCELLANEOUS.

CORRECTION.—In Number six of the JOURNAL, page 190, in the discussion of the paper read by Dr. E. M. Moore, the name of "Dr. Wile, of Cortland, N. Y.," should have been "Dr. Frederick Hyde, of New York."

THE readers of the JOURNAL are indebted to our regular Philadelphia correspondent, J. V. S., for the early and very full account of the proceedings of the recent meeting of the American Gynecologieal Society

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY FROM SEPT. 14, 1883, TO SEPT. 21, 1883.

Campbell, John, Lieutenant Colonel and Surgeon, Medical Director Department of the South: granted leave of absence for fifteen days. (Par. 2, S. O. 94, Department of the South, Sept. 13, 1883.)

Alexander, Charles T., Major and Surgeon: on being relieved from duty at the United States Military Academy, Oct. 1, 1883, to report in person to the Commanding General, Department of the Missouri, for assignment to duty. (Par. 7, S. O. 211, A. G. O., Sept. 14, 1883.)

Alexander, Charles T., Major and Surgeon: granted leave of absence for four months, from Oct. 1, 1883. (Par. 1, S. O., 213, A. G. O., Sept. 17, 1883.

Gibson, Joseph R., Major and Surgeon: relieved from duty in the Department of the East, Oct. 1, 1883, and to report by letter to the Commanding General, Department of the South, for assignment to duty. (Par. 7, S. O., 211, A. G. O., Sept. 14, 1883.)

Horton, Samuel M., Major and Surgeon: relieved from duty in the Department of the Platte, Oct. 1, 1883, and to report in person to the Commanding General, Department of the Missouri for assignment to duty. (Par. 7, S. O. 211, A, G. O., Sept. 14, 1883.)

Meacham, Frank, Major and Surgeon: relieved from duty in the Department of the East, Oct. 1, 1883, and to report in person to the Commanding General, Department of the Platte for assignment to duty. (Par. 7, S. O. 211, A. G. O., Sept. 14, 1883.)

Smith, Andrew K., Major and Surgeon: relieved from duty at Willet's Point, New York, Oct. 1, 1883, and assigned to duty at U. S. Military Academy, West Point, New York. (Par. 7, S. O. 211, A. G. O., Sept. 14, 1883.)

Taylor, Morse K., Major and Surgeon: relieved from duty in the Department of the East, Oct. 1, 1883, and to report in person to the Commanding General Department of the Missouri for assignment to duty. (Par. 7, S. O. 211, A. G. O., Sept. 14, 1883.)

Wolverton, Wm. D., Major and Surgeon: relieved from duty in the Department of Dakota, Oct. 1, 1883, and to report in person to the Commanding General Department of the East for assignment to duty. (Par. 7, S. O. 211, A. G. O., Sept. 14, 1883.)

Appel, Daniel M., Captain and Assistant Surgeon; relieved from duty in the Department of the Missouri, Oct. 1, 1883, and to report in person to the Commanding General Department of the East, for assignment to duty. (Par. 7. S. O. 211, A. G. O. September 14, 1883.)

Bartholf, John H., Captain and Assistant Surgeon: station changed from Fort Lapwai, I. T., to Vancouver Barracks, W. T. (Par. 11, S. O. 123, Dept. of the Columbia. Sept. 6, 1883.)

Merrill, James C., Captain and Assistant Surgeon: relieved from duty in the Department of Dakota, Oct. 1, 1883, and to report in person to the Commanding General Department of the East, for assignment to duty. (Par. 7. S. O. 211, A. G. O. September 14, 1883.)

Maus, Louis M., Captain and Assistant Surgeon: relieved from duty in the Department of the Missouri, Oct. 1, 1883, and to report in person to the Commanding General Department of Dakota, for assignment to duty. (Par. 7. S O. 211, A. G. O. September 14, 1883.)

Munn, Curtis E., Captain and Assistant Surgeon: relieved from duty in the Department of the Missouri, Oct. 1, 1883, and to report in person to the Commanding General Department of the East, for assignment to duty. (Par. 7. S. O. 211, A. G. O. September 14, 1883.)

Patzki, Julius H., Captain and Assstant Surgeon: to be relieved from duty in the Department of the South, Oct. 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. (Par. 7. S. O. 211, A. G. O. September 14, 1883.)

Price, Curtis E., Captain and Assistant Surgeon: relieved from duty in the Department of the East, Oct. 1, 1883, and to report in person to the Commanding General Department of Dakota, for assignment to duty. (Par. 7. S. O. 211, A. G. O. September 14, 1883.)

Vickery, Richard S., Captain and Assistant Surgeon: relieved from duty in the Department of the Platte, Oct. 1, 1883, and to report in person to the Commanding General Department of the Columbia, for assignment to duty. (Par. 7, S. O. 211, A. G. O. September 14, 1883.)

Weisel, Daniel, Captain and Assistant Surgeon: relieved from duty in the Department of the East, Oct. 1, 1883, and to report in person to the Commanding General Department of the Platte, for assignment to duty. (Par. 7. S. O. 211, A. G. O. September 14, 1883.)

Appel, Aaron H., 1st Lieutenant and Assistant Surgeon: the leave of absence granted July 20, 1883, extended one month. (Par. 10. S. O. 211, A. G. O. September 14, 1883.)

Brewster, William B., First Lieutenant and Assistant Surgeon: granted leave of absence for two months, from Oct. 1, 1883, with permission to apply for an extension of four months. (Par. 1, S. O. 107, Mil. Div. of the Missouri, Sept. 15, 1883).

Strong, Norton, First Lieutenant and Assistant Surgeon: now on duty in the field near Fort Thornburgh, Utah, to accompany command to Fort Douglas, Utah, and there await further orders. (Par. 2, S. O., 101, Department of the Platte, Sept. 17, 1883.)

THE

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EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. I. SATURDAY, OCTOBER 6, 1883. NO. 13.

ORIGINAL ARTICLES.

A FORM OF SPECTACLE FRAMES IN LIEU OF NOSE PIECES.

BY H. CULBERTSON, M.D., ASSISTANT SURGEON U. S. ARMY, RETIRED.

[Read in the Section on Ophthalmology, Otology, and Laryngology.]

In the application of glasses for the relief of ametropia and presbyopia we often have need of two pair of spectacles or glasses—one for near and another for distant vision.

It is inconvenient for the wearer to apply and remove each pair in remote and proximal vision. Again, the use of bifocal glasses is attended with the constant and often annoying influence of such lenses upon the eyes, incident to the rapid variation in the accommodation. Moreover, although it may be effected, it is too expensive to be desirable. We cannot ordinarily adapt glasses for astigmatism in the upper and lower lenses in bifocals.

We desire, then, to adopt some plan which will avoid at least some of these defects.

The first object, then, is to obviate the unpleasant effects of nose-pieces in those who are able to wear them, and we must remember that many persons are unable to retain these upon the nose.

The second desire is to secure and wear permanently a pair of spectacles of the *usual form*, with bowed temples, and which are adapted for distant vision.

The third object is to apply spectacles in front of the permanent glasses without removing the latter, and which temporary glasses shall adapt the eye for near vision, and which shall at the same time be convenient of application.

Inasmuch as astigmatism can be corrected in the glasses which are worn permanently, ordinarily the additional glasses need only be sphericals, which are inexpensive.

We present here a plan for the adaptation of such additional temporary front glasses, in spectacle form, which we regard as practical, and which are not expensive.

Figures 1, 2, and 3 will serve to illustrate these spectacles, in which "a a" represents the permanent frames, with bowed temples, to be worn next the face; and "b b" the front or temporary frames. At "c c," Fig. 1, is a flat clip, which arches back over

FIG. I

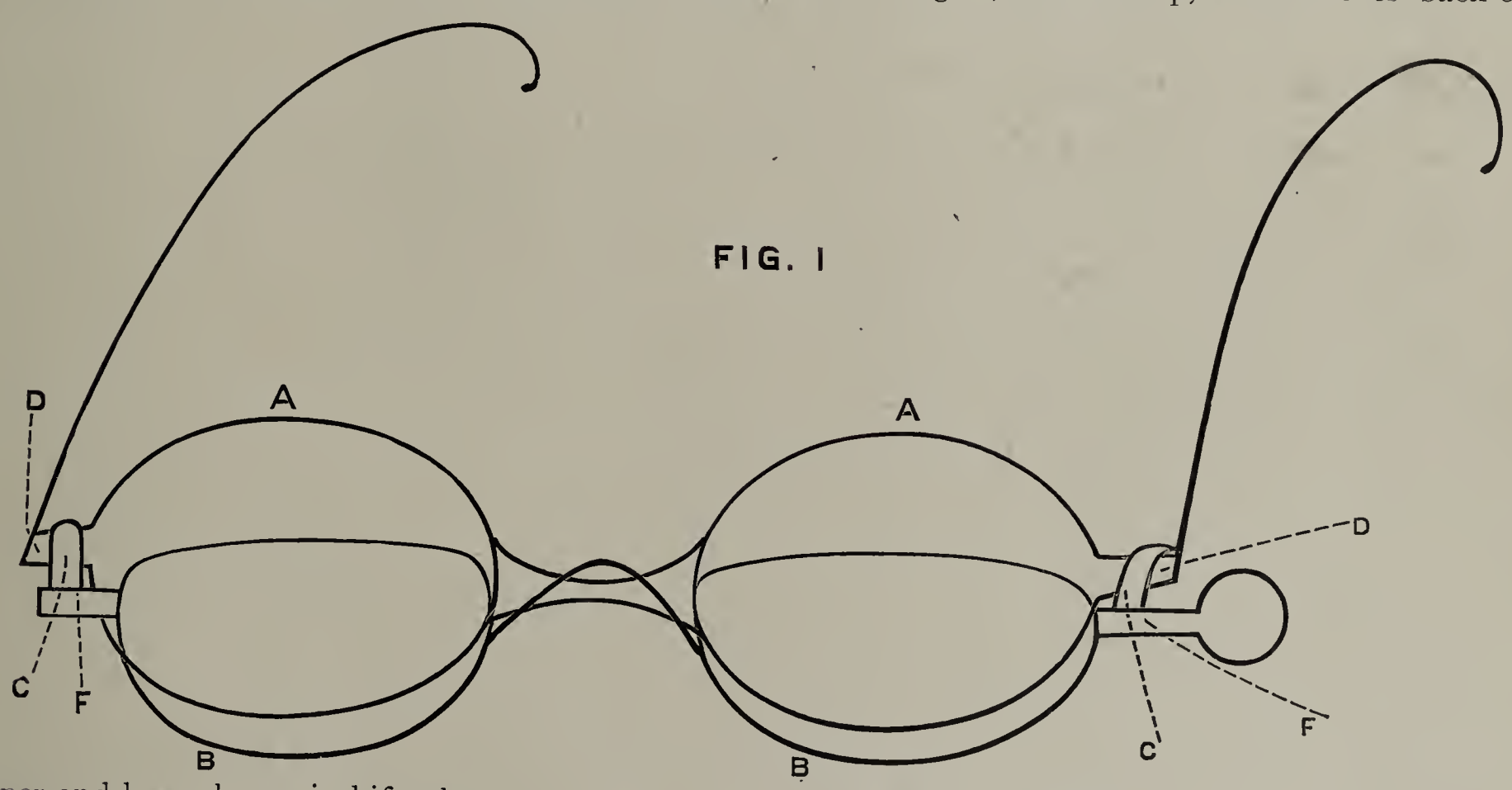


FIG. II

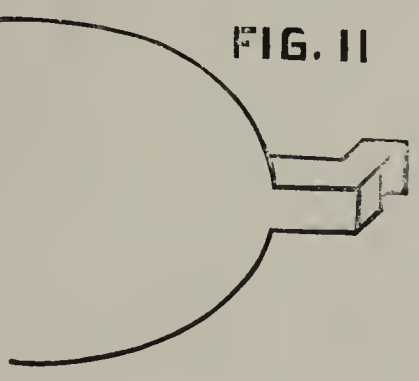


FIG. III



the end bar of the back frame, "dd," from the end bar of the front frames, to which latter these clips are securely attached: This flat clip comes down behind and somewhat below the back of each end bar of the posterior spectacles. The arrangement of this clip can be better seen in the end views, Figs. 2 and 3. This clip does not fit tightly on the end bars of the back frame, which permits the front frames to be easily adjusted or removed. (A pair of these frames was exhibited to the Section.)

One or two cases may be given illustrating the use of these frames.

G. W. W., aged 44 years, presents with A.H manifesta and presbyopia. His right eye is sightless. On trial, I find in the left eye his near point is 25 cm., or 4D, and that with a $+ D1.25_s + 1D_c$ axis 180° its vision $= \frac{5}{5}$ m, remotum. We order this combination, for distance, in the permanent frames. At his age he has D 1, of presbyopia; we add a $+ D 1._s$ for his left eye, placed in our temporary frames, and a plane glass in either frame for the right eye; and he reads S.DO.5, up to 22 cm., and his range of vision extends to 33 cm., looking through the permanent and temporary glass simultaneously.

Miss S. W., æt. 19 years, applies for defect of distant vision—myopic astigmatism. Remote vision R and L eye $= \frac{5}{10}$, and proximal vision R and L eye = 8 to 40 cm. Without mydriatic, with $- D 1.75_s$ RV $= \frac{5}{4}$ remotum; and with $- D1.5_s - DO.25_c$ axis 80° VL $= \frac{5}{4}$ remotum; $V_2 = \frac{5}{4}$ remotum. These are applied in the permanent or back frames, to be worn constantly for distance. We now give for the L E $+ D1.5_s$, and $+ D1.75_s$ for the R E, to be placed in the frames worn in front of the permanent glasses, thus neutralizing the concave spherics worn for distance, and leaving the astigmatism corrected in the L E, and now looking through both glasses $V_2 = \frac{DO.5}{30\text{ cm}}$ proximum. She has no difficulty in placing or removing the front frames at pleasure.

But why not permit this lady to wear the permanent glasses for wear and for work? At her age she has 10 D of accommodation, her near point per force of A = 10 cm. If the glasses for distance are worn for near-work, accommodation up to 22 cm, or 4.5 D, from the cornea, will not be 4.5 D for each eye, but in the left eye will be 4.5 + 1.5 = D 6.0, and in the R E will be 4.5 + 1.75 = D 6.25. Thus in the left eye, accommodation must be increased D 1.5, and in the R E, D 1.75, in order to see at D 4.5. This is casting such an additional duty upon the ciliary muscle, to overcome the hyperopia induced by proximity, as to lead to asthenopia and its evils. It must be remembered that the myopia has been corrected by the concave glasses for distance, and that the patient does not wish to be removing her distance-glasses every time she desires to see near at hand. As our front glasses are half-moon shape, she need not do this, as she can see above the front or near glasses, in the distance, through the permanent glasses, and yet can remove the front frames at pleasure.

These glasses are not expensive, and are made by A. Meyers & Sons, 97 William St., New York City.

SURGICAL TREATMENT OF PURULENT PLEURITIC EFFUSIONS IN CHILDHOOD.

BY W. H. MYERS, M.D., FORT WAYNE, IND.

[Read in the Section on Diseases of Children, June, 1883.]

In 1872 I was called to visit a boy, aged eight years. The history of the case and the physical diagnosis disclosed the presence of fluid in the left pleural cavity. Its nature was determined by the exploratory puncture with the hypodermic needle. After thirty days I was in doubt as to the treatment pursued, and I sent the following telegram to Prof. Bowditch:

"Patient æt. eight years; pleuritis, followed by empyæmia; three aspirations; interim ten days. First aspiration, 36 ounces; second, 24 ounces; third, 36 ounces of pus," and in his absence received a reply from a physician of acknowledged ability to "aspirate." I followed his instruction during the remaining six weeks that my patient lived.

The result of the treatment impressed me so profoundly that I have never followed up a succession of aspirations in empyæmia; but am convinced that the aspirator ought to be used as a curative procedure in serous effusions only, and the knife in purulent effusions.

Is it true that in some cases by emptying the pleural cavity containing pus with the aspirator, that it does not refill? If it does not refill it is probable that the rapid expansion of the lung and the complete emptying of the cavity prevented the re-accumulation, or that the fluid merely presented the appearance of pus without possessing any of its distinctive characters. I do not believe in its disposal by absorption. What has been the experience of those members of the profession inclined to adopt aspiration as a curative measure, and under what circumstance have they effected cures by this measure?

My reasons for advocating the use of the knife exclusively after the first aspiration are—

1. That the cavity refills after the use of the aspirator in purulent effusions.

2. That the repetition of the needle punctures is painful, and fraught with shock and terror to the young subject.

3. That much valuable time is lost, tentatively allowing the lung to be bound down by firm adhesions, allowing them to become fibrous and toughened, thereby preventing the complete re-expansion of the lung by atmospheric pressure after the use of the knife, leading ultimately to the contraction of the side corresponding with the effusion.

4. That speedy relief of the lung promotes its complete re-expansion, and that this can only be accomplished by the knife, and seldom, if ever, by the use of the aspirator.

5. That the question of the admission of air into the pleural cavity in these cases is virtually settled, and has ceased to be an important factor in the treatment.

After the permanent opening is made with the knife or torcar in the seventh or eighth intercostal-space in the posterior axilliary line we can insert a Jacques or

India-rubber drainage tube through the canula or in the wound made by the knife, and allow it to remain, the external end to be covered with a thick layer of oakum as an absorbent. One opening is sufficient.

In young children, who are terrified at irrigation, I believe that immersing them in a warm bath containing Condie's disinfecting fluid by far the best to wash out the cavity.

GASTRO-ELYTROTOMY.

The following comments should have followed those of Dr. Dandridge as a part of the discussion of of Dr. Taylor's paper on Gastro-Elytrotomy, in the the number of the JOURNAL for August 18, 1883, but were accidentally overlooked. ED.

Dr. W. H. Wathen, of Louisville, regarded Dr. Taylor's gastro-elytrotomy as another illustration of the perniciousness of delay in abdominal section for removal of a child. The operation, as is too often the case, was performed only as a *dernier resort*, when the woman was so prostrated from protracted labor and by the effort to perform craniotomy, that success could not have been expected. Valuable time was probably lost in the ineffective attempt to perform craniotomy, though the child was dead, and the pelvis nearly three inches in its several diameters. Parry has shown that in craniotomy in pelves of two and a half inches or less, in the conjugate diameter, the mortality is 50 per cent., while it is only 25 per cent. in the timely Cæsarean operations in the United States. With 75 per cent. of recoveries in cases of election in Cæsarean section when abdominal surgery was in its infancy, we may expect the future to show us success in similar cases of 90 per cent. In 119 secondary operations on 48 women there were only 8 deaths—a mortality of about 6.83 per cent. This success may have been partly due to a greater tolerance for the operation in these women, but it was mainly due to the fact that the secondary operations were performed early and with care, as a complication demanding the operation was known to exist. Porro's operation, or Miller's modification, has been performed about 110 times with a success of 56 per cent. These results in Europe, and especially in European hospitals, are encouraging compared with the Cæsarean section. In European hospitals nearly every case of Cæsarean was fatal, while Porro's and Miller's operations have saved 40 per cent. These operations and gastro-elytrotomy may be often successfully substituted in Europe for the Cæsarean section, but no such change is indicated in our country. These operations can never be generally adopted, and must be mainly confined to large cities and hospital practice, in the hands of experienced operators with good assistants. The Cæsarean section is much more easily done, and has been performed with no assistant. Though the uterine incision should always be sutured, this is not more difficult than suturing the abdominal wound.

In conclusion, I wish to inveigh against the reckless sacrifice of human life in craniotomy—as much from a scientific as from a moral view, and to urge upon the profession the great importance of timely abdominal section as a substitute that would be followed by equally good results to the mother, and spare us the shame of murdering a helpless child.

ARTICLE ON DENTITION.

BY DR. A. H. GOOD, SELMA, IND.

Read in the Section on Diseases of Children, June, 1883.

MR. PRESIDENT, AND GENTLEMEN OF THE AMERICAN MEDICAL ASSOCIATION: The process of dentition is not properly classed as a disease, but the diseases which accompany it are numerous; hence I have given my paper the nomenclature Dentition. In order to be brief, I will not refer to statistics. In dentition, with its accompanying diseases, the mortality is generally greater than in all other diseases to which children are subjected. Some children are more easily disturbed by teething than others, because of not being so strongly organized, or because of some peculiar susceptibility to its influence. I conceive it to be true that the process of dentition acts more severely (although a natural one) than would foreign bodies similarly located. At the extremity of each tooth-root is the dental foramen through which the dental nerve passes, and during the growth of the tooth there is an inflammatory action, which, coming through the nerve agency, reflects with great power through the same channel, and is generally distributed through the sympathetic nerves. We then have, in addition to the tooth acting as a foreign body, a reflex nervous irritability. Our attention is first called to the teeth, and when the gums are swollen they should be divided, to relieve pressure, pain, and inflammatory action.

When apthous ulceration occurs, it should be treated with a solution of persulphate of iron, or some other astringent lotion.

We have, as a concomitant, a functional derangement of the stomach and bowels, resulting from innervation, the sequel of the reflex nervous irritation, and displaying a yeasty and soured condition. This we *may* find, upon microscopic investigation, to contain myriads of bacteria. Can we not, then, trace the origin of bacteria, if found in the stomach and bowels of these patients, to be the result of mal-nutrition and the cause of cholera infantum? The treatment for this condition varies according to the mildness or severity of each individual case and the surrounding circumstances (viz. foul or pure air, squalid or comfortable apartments, and a strict observance of the laws of hygiene). But when the disease is established, and the removal impracticable or impossible, then comes the severe trial to the physician, anxious parents and suffering child. A high rate of mortality, every act of the physician closely watched, even his changes of countenance from anxiety to forlorn hope closely scrutinized, and so "ad infinitum." The thermal ranges are various in different and even in the same cases, in the acute form often reaching 103, 104, or 105 degrees Fahrenheit; in the more progressive form usually much lower. The pulse generally corresponds to the temperature.

Viewing the disease from my standpoint, I begin the treatment for the disease proper with nervines, and as a normal temperature (or a somewhat elevated temperature, is a favorable condition for micro-organisms and inflammation), I use cold compresses to the bowels and ice water injections, and for the secondary symptoms I use pepsine, sub. nit. of bismuth, and carbolic acid.

DISCUSSION ON DR. GOOD'S PAPER.

Dr. Woodworth, of Illinois, said that in a practice of thirty-three years he had always been in the habit of lancing the swollen gums of teething children, with good results. Beside giving relief, he thought the teeth came on more readily with scarification of the gums than without.

Drs. Earle, of Chicago, and Boothby, of Wisconsin, testified to the relief given in the reflex diarrhœa of teething children by scarifying the gums, medicine being entirely withheld, but particular attention paid to diet. Dr. Boothby never scarified only for a diarrhœa, believing that to be the only indication.

COMMON DISEASES OF CHILDREN.

BY R. L. MOORE, M.D., SPRING VALLEY, MINN.

[Prepared for the Section on Diseases of Children.]

One cannot treat children for any length of time without being impressed by the fact that the diseases that exclusively belong to them are few. There will appear a certain unity of signs and symptoms in each case. The ordinary critical observer will soon learn to generalize these into two classes. If he has eyes to see and sees, and ears to hear and hears, he will perceive that in almost every case of sickness in children there is some trouble with either the breathing or digestive apparatus. And if he exercises his faculties he may soon learn to read the signals which nature hangs out to inform him as to which set are in trouble. Now he should not lose his balance, and imagine that an inflammation exists in one or the other set of organs. More often in the large majority of cases it is simply a condition of irritation. And because of this, let him not rush to the other extreme, and think that the child is not seriously ill. No. Let him remember that "a sick child is always dangerously sick."

This "irritation" may cause other and distant organs to be violently perturbed, through sympathy. Be not deceived by these manifestations, nor admit that you "wish the child was old enough to tell what is the matter." The whole story is before you. Read it.

What shall you name the disease? Yes, you must have a name to give in reply to the first question, "What is the matter?" One of several will do: Catarrhal fever, ephemeral fever, irritative fever, simple fever, worm fever, gastric fever, infantile remittent fever. Either of these names, I venture to say, will well enough describe the greater number of cases of sickness in children, outside of some specific epidemic diseases. What are you going to do about it? Treat it. And right here I beg of you, do not perpetrate the swindle of writing a prescription (in poor Latin, perhaps) for maybe a four ounce mixture of medicine, in which there shall be probably some opiate, bromides, tinctures and syrup. A teaspoonful, more or less, every two to four hours. Do it and the chances are that your little patient will be worse next day. Exercise a little common sense. Have your own simple remedies with you. Put drops, four, six, eight or ten, of specific or German tincture of aconite and belladonna into a tumbler, goblet or teacup and add twenty-five teaspoonfuls of water. Give a teaspoonful every half an hour or hour. And give plenty of water to drink, with cool sponging off, if the fever runs high, and plenty of good air to breathe. The chances are as fifty to one that the little sufferer will be better and comfortable in twenty-four hours. I would add that sometimes verat. viride should take the place of the belladonna. And again, a few small doses of calomel and santonine well rubbed down with sugar may be very necessary.

The only objection which some so-called "medical men" can offer to this method of treating the "common diseases of children," is "that the little ones get well too soon."

Our profession ought not to rest easy under the odium often repeated by the laity, "that it is so difficult to treat a sick child, because they are too young to tell what is the matter." Children are more desirable patients than adults. They respond more readily to remedies.

This is a fact that all will admit. They are free from the worry and friction of the little cares of life, which depress so many adult patients. They have no fear of death. This is another great factor in their favor. Did you ever know of a child dying from chloroform?

No. I venture the assertion that the large majority of the deaths from chloroform are from fright. The patient has heard that it is dangerous. There is some ominous looks, an examination of the heart and lungs, an array of restoratives of various kinds, and a general expectation that some untoward event will happen. When the patient begins to feel the queer sensation produced by it, and with those last impressions so fixed in the chloroformed brain, he, or she, is alarmed, faints; the heart stops for a moment, it cannot start again, and all is over! The child has none of these things to contend with.

One of the watchwords in treating children is ELIMINATION. Don't lock up the secretions. Give Nature, that grand old mother, a chance. Very rarely should opium, nor any of its preparations or derivatives, be used in the treatment of children. He who abides the nearest to this rule will always have the best success in treating them. Look after them closely. Stand by the small and frequently repeated dose of tasteless medicines. Never forget that a sick child is always dangerously sick.

THE DUTY OF THE HOUR.

BY HENRY LEFFMANN, M.D.

[Read before the Philadelphia County Medical Society Sept. 26, 1883.]

In his work on the descent of man, Mr. Charles Darwin, of blessed memory, remarks that he made in the course of his studies a large collection of the definitions which have been offered as expressing the distinctions between man and the lower animals. The primary object of this collection was to show the insufficiency of such definitions, but unfortunately the learned author abandoned his plan and the list was never published. I have always regretted this because I was anxious to see if any one has been bold enough to sacrifice the honor of the race to its independence; in other words, to define the human being as the only animal in which natural passions are abused and unnatural appetites developed. Though it may be a pessimistic view of human nature, yet we cannot avoid the conclusion that the definition is substantially correct. The history of races and nations presents us invariably with a picture of unbridled passions, the fierceness of which is but slowly and uncertainly assuaged by civilization, for in the modern as well as in the ancient world, it is in the centers of intellectual development that the greatest license has been seen. Legislators both of the civil and ecclesiastical order have wrestled with these moral problems and with some forms of excess; have tried every expedient from the most despotic repression to the most indulgent remonstrance, but with only partial advantage.

Among the vices which appear to be characteristic of man under every climate and social condition is the use of alcholic liquors, and although the evils of this indulgence have been vividly presented to every one, yet a determined effort to obliterate the habit belongs only to our own time. In that almost exhaustive treatise on moral and religious polity, the Jewish and Christian scriptures, we notice that the duty of total abstinence has not been inculcated either among the Hebrews, although the daily duties of life were regulated with microscopic minuteness, nor among the leaders of the new dispensation, although they founded a most extended system of asceticism and self-denial.

We are concerned, however, with the present not with the past. Around us is a social system of great complexity. Though progress is slow, yet we need have no fear of its general direction. Each year marks too slight a movement to permit us to destinguish the result, but each century gives us a definitely recognizable advance, and shows clearly the tendency of the race to a higher and purer life. It is the text of my discourse to-night, that the basis of this higher morality is self-restraint, and the basis of self-restraint is the influence of example.

In consideration of total abstinence and the relation of the medical profession to its encouragement we must clearly distinguish between the use of alcohol as a beverage and as a medicine. With the question of its therapeutic indications and contra-indications we have absolutely nothing to do in this paper. As to the method and form of its clinical use, however, as will be shown later, very important questions arise.

I think I may safely assume that the use of alcohol is not necessary to the maintenance of ordinary health. Its physiological effects have been extensively studied and concordant results have not always been attained. I need not stop to reconcile their differences, for the greater portion of the published results is not germain to my subject, nor will it be necessary to devote time to the presentation of statistics.

One authority will be sufficient, because it is an authority in whom opportunities of observation and experiment are combined with sound common sense and accurate logic. Without desiring to slight the labors of other workers, I think we may find in Parkes' Hygiene the whole subject of alcohol so thoroughly discussed as to render other authority superfluous. In this work it is established beyond question that the use of alcohol is not beneficial; that it does not increase the power of the system to resist extremes of heat, cold, or fatigue, and that even in special cases in which stimulants appear to be needed to maintain the resisting powers, other substances may advantageously be used. It is certainly surprising to read that one of the most common opinions, I would rather say superstitions, about alcohol, that it assists the body in resisting cold, is without foundation. Scarcely any of the minor causes of drinking are more general than this, yet the unanimous testimony of those who have been in charge of polar expeditions is against its beneficial action in such vicissitudes; and some of these leaders have, after their first experiences, declared that they would not take on any subsequent voyage any person addicted to the use of stimulants. As regards the general effect of the continued use of alcohol on persons in ordinary health, I cannot do better than quote briefly from papers read by well known clinicians before this Society two years ago. Dr. Wood says:[1] "Although I hold that the habitual use of alcohol is to well-fed persons not only unnecessary, but positively baneful, it seems to me that in many cases of disease, and in those periods of life when by reason of age the body waxes weak, alcohol is possessed of great value. Under sixty years of age the daily employment of wine may for most persons be very well discountenanced. * * * * It is notorious that in America almost every one in reasonable health consumes much more food than the system needs, so that any alcohol taken is added to that which is already in excess." Dr. Pepper holds[2] that the quantity permissible is very small, not more than one and a half ounces of absolute alcohol in twenty-four hours, taken much diluted, and only at meals. A very large number of persons, either from susceptible stomach or a gouty diathesis, cannot safely take alcohol at all. Dr. Bartholow says[3] as a stomachic tonic "alcohol is

[1] "Is Alcohol a Food?" Proceedings Phil. Co. Med. Soc. Vol. III., p. 135.

[2] "Effects of the Prolonged Use of Alcohol on the Nervous System and Organs of Special Sense," *Op. cit.*, p. 139.

[3] "Alcohol; its Therapeutical Uses Internally and Externally." Op. cit., p. 127.

effective only in the case of those not habituated to its use. * * * * That in time a catarrhal state of the mucous membrane is produced, and a pathological secretion obtained shows the impropriety of the long-continued use of alcohol as a stomachic tonic." Finally, although relating to the therapeutical use of alcohol, I cannot avoid quoting some forcible and logical remarks made by Dr. Woodbury[4] in a discussion on the treatment of pulmonary consumption: "Nothing in clinical medicine is more certain than that the continued use of alcohol in even moderate doses stimulates the development of connective tissue all over the body; nothing in pathology is more evident than the fact that alcohol is a prolific cause of pulmonary disease, nothing in toxicology better established than the observation of the action exerted by alcohol upon the respiratory center. For this reason it is especially dangerous in pulmonary consumption."

It is unfortunately too true that no quotations from authority nor rehearsal of statistics are needed to show the moral and physical injury done by alcohol. Directly and indirectly it is a prime factor in the promotion of disease and crime, and when we reflect upon the thousands of desolate homes and ruined prospects for which this agent is annually responsible, we can not wonder at the sentiment which is slowly but surely developing in the community against all phases of industry or trade which have for their object the furtherance of the use of alcohol, nor can we doubt that to the success of the work of moral regeneration of our race, the obliteration of these industries is essential.

A powerful assistance in securing and maintaining sobriety would be to destroy the superstitious respect in which the various beverages are held. Now, medical persons are generally aware that physicians attribute particular value to particular liquors. In my own experience I have found very few persons who are willing to admit that they use liquor merely because they like it. They generally find some other reason—the necessities of the system, the advice of some physician either to themselves or to some friend. One person uses beer because it is a tonic, another because of its nutritious value, and so on; every reason but the real one, because they like it. Not a little of this popularity of liquor is due to the glamour of sentiment which attaches to it even the austere psalmist who, with the exception of a simple sin, "did that which is right in the sight of the Lord" has praised the "wine that maketh glad the heart of man," and for ages poets and prose writers have extolled the qualities of stimulating beverages and the romance of their manufacture. In our time, however, these sentimental features are but imaginary. Nothing in the present methods of producing liquors is of a character to make us respect them as types of poetic or convivial relations. The wine that stands on our tables no longer shows in its ruddy color its rainbow tints.

"Caught when the morning sunbeams stooping low,
Have kissed Grenadas' plain
Nor does its aroma repeat
The dainty perfume of the East
That Horaee used to praise."

No, the suggestions that are now called up by those who know the facts are the suggestions of the fourth floor of a Front street warehouse, where rectified spirit, animal charcoal, glycerine, sapoinfeed cotton-seed oil, aneline red, burnt sugar *et hoc genus omne* are being mixed together and transferred to casks and bottles ornamented by lying labels. The foaming tankard of malt liquor no longer suggests the

"House where nut-brown draughts inspire,"

but the images now appropriaté are those of bloated workmen, aloes, quassea and other hop substitutes, salicylic and boric acid, baking soda, gum for preserving froth and beer pumps for producing it. In short, no romance belongs to our alcoholic beverages. They are the products of influences allied with the lowest levels of mercantile honor, and their touch is corrupting.

In an article read before this Society two years ago[1] I put forward the view that when alcohol is to be used by physicians it should be used as such, and not in the form of special manufactures. I cannot express myself better than by my words on that occasion, as follows:

"We know that liquors prepared by strictly natural methods are not constant in composition; we know that under the exigencies of trade additional conditions of variation are produced, and even complete substitution brought about. I have for some time thought that the best way to secure entire constancy in the therapeutic use of alcohol would be to have the preparations made up by regular prescription or printed formula in the pharmacopœia. The substances which exist in wine, beer or brandy are in accidental mixture—some are useful, others are useless. Why should we not have the useful articles properly combined by competent hands, and the useless omitted, * * * * * and the physician, instead of ordering a special wine, will simply prescribe such proportions as may be necessary of alcohol, water, flavoring others and astringent or bitter principles."

These prescriptions, like others containing powerful ingredients, should be renewable only at the instacce of the physician.

I have lately learned with much pleasure that Dr. A. W. Muller, of this city, a gentleman well known to most members of the Society as an experienced pharmacist, is about to publish a paper advocating a similar view. Dr. Müller, indeed, expressed such opinion publicly several years ago, although I was not aware of it then. His large experience in the manufacture of flavoring, coloring and other materials used in liquor imitation, gives him the right to speak with authority, and I find by my conversation with him that we are entirely in accord. In his paper he intends to call attention to the fact—which I would not have time to consider—that in wines and brandies practitioners articles are sold at high prices,

[4] Proceedings Phil. Co. Med. Soc., vol. IV., p. 175,

[1] Medical Relations of the Commercial Adulteration of Wines and Liquors.--Proceedings Phila. Co. Med. Society, Vol. III., p. 132.

and thus the practice of ordering such articles exposes patient to both deception and robbery.

Not the least of the injuries which is done to the community by the laxity of physicians in reference to the use of liquors is the encouragement which is thus given to the sale of quack medicines under the guise of bitters and tonics. No greater fraud is put upon the public than the preparations which are advertised under these names. They are alcoholic beverages in their most dangerous and insidious form. I have this week examined one of the most extensively advertised of the lot—Warner's Safe Tonic—and I find it to contain about 10 per cent. of alcohol in association with some vile combination of syrup and bitter extract. When it is remembered that the miserable stuff is bought at a price much above its value, and is used mostly by persons already somewhat out of health, we must see that the harm done is incalculable. Yet the popularity of these articles is largely due to the fact that they meet what most people believe to be a necessity in dietetics—an alcoholic tonic. During the last few years several eminent physicians and chemists in this country and abroad have gone almost in spasms over a knowledge of such adulterations as the use of alum in baking powders, glucose in candy, and oleomargarine in butter—all trifling and non-injurious substitutions, but we have very little about the far more damaging preparations of the class just alluded to. The most striking evidence of the profoundly misguided condition of the public mind on these topics was well shown lately in New York, when the officers of the Business Men's Moderation Society gravely condemned the use of the harmless glucose in beer, and then gave inferentially at least certificates of wholesomeness to beer containing between 4 and 5 per cent. of alcohol! The quack medicine mentioned above has with each bottle the official certificate of the Professor of Chemistry of the University of Rochester, stating that the preparation is free from deleterious ingredients. I feel sure that statement like this could not be made if medical authorities were true to their own knowledge on these questions.

It is in view of the points which I have here enumerated that I feel obliged to lay before this society and through its published proceedings before the world the accusation that the medical profession is responsible for a very large portion of the misery which alcohol beverages produce, and I declare that the time has now come when a stand should be taken in favor of abstenance. I believe that it is established by the citations I have given that alcohol is not needed by healthy persons. I know that many non-medical persons use liquor because of the general approval of it by the medical profession, and I think it can be demonstrated that although alcohol itself is a substance of great value, alcoholic beverages are entirely unnecessary. Of late years, although physicians have assumed the right to speak boldly upon many questions effective of public health and public morals, they have been regularly conservative as regard the evil of moderate drinking. Yet it seems to me that sewer construction, registry laws, quinine pills, river pollution, ethics, innovations, etc., on which topics so much energy has been expended recently, do not approach in magnitude the reform which is here urged. The pollution of a river water by organic matter before it reaches a city reservoir is rarely so serious in its effects as the pollution of it by alcohol after it leaves the hydrants, and the dangers of Rye Beach of which we have heard so much are trifling compared with the dangers of rye whiskey or what is labled such.

The learned professions are potent influence in moral reform, and for many centuries law and divinity have exercised much more control over the race than has medical authority. This relation is now rapidly changing. The questions of civilization are regarded as practical problems largely medical in character, and the direction of education is passing into the control of the scientist and physician. Both the lawyer and the divine have recognized alcohol as a foe to public and private virtue; our courts now frequently regard intoxication as an aggravation rather than an excuse for crime, and the almost unanimous temper of church men is against any form of indulgence in stimulants; even the time-honored employment of wine in communion is not sufficient to maintain its use, and unfermented wine is now a familiar article of commerce. Let us then begin at once to discharge our duties, and ally ourselves openly with ——— of the laity, who, though lacking in scientific knowledge, have the good of the community at heart. Let us recognize that while many evils claim our attention, the importance of a firm stand in favor of total abstenance is urgent and in indeed the "duty of the hour."

TINNITUS AURIUM AND THE DEAFNESS WHICH ACCOMPANIES BRIGHT'S DISEASE.

BY LAURENCE TURNBULL, M. D., AURAL SURGEON TO THE JEFFERSON MEDICAL COLLEGE HOSPITAL.

[Read in Section on Ophthalmology, Otology and Laryngology.]

Within the last two years my attention has been called in hospital and private practice to several cases of Bright's Disease of the Kidneys in which there was disturbance of the hearing; and the following is a report of a few of them:

Case 1. Acute Interstitial nephritis.—E. F., aged 18, a lad of delicate organization, was attacked with nephritis while exposing himself after bathing in the sea at Atlantic City. He had a chill, followed by pain in the region of the kidneys, and he was not promptly treated, and no examination of his urine was made for several weeks, while he was under the care of two physicians prior to his visiting me. When he presented himself he had slight œdema of the face and extremities. There was no dimness of vision, but loss of hearing, with a recent muco purulent discharge from left ear. There was some oppression in the breathing and irregularity in the heart's action. For weeks, at intervals, he had gastric disturbance with vomiting, which was always followed by an increase of the symptoms.

Having a cough I examined his lungs and found râles at the base of the left. The heart was slightly

enlarged but did not present the galloping sound so frequently found in Bright's Disease.

Examination of the urine gave the following results: Color yellow, reaction acid (sp. gravity 10.15), uric acid abundant, albumen three-fourths after boiling and testing with nitric acid; microscopic examination some epithelium casts and fatty scales.

On examination of the left ear found recent perforation of membrana-tympani, with granulations and the meatus was bathed in muco-pus. R. M. T. thickened and sunken, with more or less buzzing tinnitus in the R. His eustachian tubes were open.

By careful diet, warm bath and internal treatment chiefly, by Infus. Digitalis Comp. the albumen has almost disappeared, and under milk diet the young lad is able to resume his duties as a clerk, with occasional slight increase of albumen on exposure or irregularity of diet.

The left ear was treated by cleansing with absorbent cotton and the application of powdered boracic acid, so that the discharge is almost nil and hearing much improved.

Case II. Acute Parenchymatous Nephritis.—Pain in the ear and temporary deafness.—Miss E. B. W., aged 24, was suffering May, '82, with slight fever, malaise and debility, with loss of appetite; also slight œdema of the face, for which she was sent to the sea-shore, Atlantic City." On her return was attacked with tinnitus aurium in the right ear, for which she was sent to see me, in August, 1882. On inquiring it was stated that she had brought on the attack of œdema, etc., by painting in oils with the free use of turpentine. Feeling somewhat alarmed, owing to the death of a brother with chronic Bright's disease, the urine was examined but nothing abnormal was found at that time. There existed, however, the defective hearing and noises. The ear was examined and there was found hyperæmia of the membrana-tympani, with obstruction of the Eustachian tubes and persistent tinnitus. These symptoms were treated by inflation with the vapor of chloroform in Politzer's air bag, counter irritation over the mastoid with tincture of iodine. She was placed upon a tonic of beef, wine and iron, and was much improved. After marriage she removed into the interrior of Pennsylvania, and I did not hear of her until she became pregnant, when I was informed that with this she had a severe attack of dyspnœa, and œdema, which had invaded the whole left side of the body, and that her physician had pronounced that she had a form of Bright's Disease. Soon after this she became much worse and returned to the city and was placed under my care. A large amount of albumen was found in her urine, with epithelium casts and fatty deposit. She was from January, 1883, under active diuretic treatment, and soon was delivered of a fœtus of three months, by the breech, with a slight hæmorrhage. This was followed by a great amelioration in all the symptons for a time. She had a slight relapse in March, and on the 19th examination of the urine was made, one-fourth albumen when treated by boiling and nitric acid. The fluid, under the microscope, showed a large quantity of blood and renal debris. This, no doubt, was the hæmorrhagic stage of the disease. To diminish the hœmorrhagic tendency she was placed upon the Mist. Ferri. Comp. (Bashane), which she took with decided benefit, but it had to be omitted, owing to the pain in the head and active congestion of the base of the lung with cough. This was treated with tincture of iodine as a local application, and an emulsion of cod liver oil with wild cherry.

March 24th. Again a return of severe pain in the ear with congestion of membrana-tympani and noises. They were relieved by Politzer and free use, by the nostrils, of chloroform, which was also forced into the middle ear. She was then kept in bed and on a more rigid diet of skimmed milk every two hours with toasted bread, mutton chop with boiled onions; no acids or sweets of any kind. The fluid extract of jaborandi was then employed, commencing with ten drops three times a day, and gradually increasing to twenty-five. This kept the skin moist by its action on the cutaneous secretions. She complained of her imperfect vision, and on examination of the eyes by the ophthalmoscope I discovered a well-marked albumenuric retinitis with extra deposit of blood spots on the retina. She had at times great difficulty in determining the faces of the family, there being a mesh before her eyes.

11th. All the symptoms favorable; has taken no medicine except the jaborandi and most careful diet.

April 18. Examining the urine this day and for three days since, I found no albumen or casts; patient able to see better; spots of blood disappeared. Case still under treatment May, 1883; no albumen, and is able to be out of bed and has been out to walk; hair all dried up and had to be shaved; had a relapse in June, 1883, and had to keep her bed for most of the month; improved again in July; was taken to the country; had to be in bed most of the time as the weather was cool and damp; better again and is almost able to return to her home in the city, and has continued better up to Sept., 1883, still, however, employing an extract of jaborandi.

Case III.—This case occurred at Jefferson Medical College Hospital Ear Clinic. E. G., a young lad aged 15, presented himself in the last stages of Bright's disease in which there was every evidence of fatty degeneration of the kidneys, and the same condition of the auditory nerve and retina, with profound deafness. He had the noises in the early stages of the disease.

Case IV.—W. V., aged 45, workman, has anaiarca with polyuria, dyspnœa, amblyopia and epistaxis, with almost complete deafness without the tinnitus aurium. There was a transudation of serous fluid from the ear, but no perforation of the membrana-tympani, and with but little change in normal appearance of the same. He had constant and persistent noises for which he had been under treatment for months before he presented himself at our clinic.

Case V.—Acute parenchymatous nephritis. W. H. W., aged 35, had been under treatment by a physician of this city for rheumatism and congestion

of the liver when I was called in consultation as he had an affection of the ear. Otitis media purulent, with tinnitus aurium, which had preceded the other diseases. He also informed me that he had suffered from dyspnœa for months on going up stairs. This I found was from hypertrophy of the heart, but he had never had œdema of the face and extremities until I discovered a slight puffiness around the eyelids when visiting another member of the family. The young man had never experienced any difficulty in passing his urine, and the following was the examination of the urine:

April 15.—Light color and muddy aspect; sp. gr., 10.10; albumen, one-fourth coag. with nitric acid; excess of uric acid with epithelium and some hyaline casts.

Diagnosis.—Acute desq. nephritis with uric acid diathesis.

He was kept in his room, but would not go to bed or be careful of his diet; treated by means of various agents—diuretics, diaphoretics, tonic and mineral waters, but no improvement took place in his condition, but he gradually became worse. Another examination was made of the urine on April 18. The microscopical examination of the specimen of urine gave the following results:

Numerous crystals of oxalate of lime.

Multitudes of cells from the uriniferous tubules of a granular nature, containing from one to three nuclei each.

A few blood and pus corpuscles.

Many fine granular and epithelial, and a few hyaline casts.

Soon after this last examination violent headache and vomiting came on, followed by uremic convulsions and death. A post-mortem was made, and there was found the large pale and fatty kidney, with acute hæmorrhagic congestion of the brain. The literature on the subject of disease of the ear in connection with Bright's disease of the kidney is very meager, and especially is this so in ordinary works on diseases of the ear. We have one valuable case reported by Schwartze,[1] with a post-mortem, which proves that the cause of the deafness was from hæmorrhages from the tympanic vessels, followed, as in one of our cases, by the escape of a serous discharge; two other cases by perforation, with discharges of purulent fluid.

Most of the authors on diseases of the kidneys have not noticed the affection of the ears with the exception of Rayer and Rosenstein. The first merely cites the fact that there were auditory symptoms in one case.

Rosenstein reports the case of a young girl who, in the course of a parenchymatous nephritis, was taken with deafness—at first intermittent, then persistent and complete. Rosenstein asks, To what cause should this deafness be attributed? He inquires whether it was due to the sulphate of quinine that the patient had taken in the course of the disease, but wisely concludes by assigning it to an "œdema of the auditory nerve."

[1] *Archiv fur Ohrenhlil Kunde, Bd. IV., p 12.*

M. Dieulafoy[2] reports five cases, and Dr. Grey, of Paris, two, and adding to these the five I have reported and the two from Rayer and Rosenstein and one by Schwartze, makes eighteen.

They may be divided into four classes:

1. Permanent and complete deafness, 4.
2. Marked but temporary deafness, 10.
3. Dullness of hearing, 4.
4. Buzzing and roaring in almost all cases.

In all forms of Bright's disease, especially in hæmorrhagic and fatty degeneration of the kidneys, but as a rule, auditory symptoms are found in all forms of nephritis, both acute and chronic.

It will also be noticed that the ear symptoms occur at all stages of nephritis. The intensity of the auditory symptoms vary very much.

The local lesions of the ear are as follows:

Hyperæmia of the membrana-tympani; deposit of blood, serum and pus with or without perforation of the membrana-tympani, vascularity, on a level with the handle of the malleus, with hæmorrhages within the labyrinth, either as serous or it may be sanguineou, fluid, and later fatty degeneration of the auditory nerve.

These symptoms of disturbance of the hearing may be of assistance in the diagnosis of an obscure case of Bright's disease. At times we have neither œdema or affections of the eyes, and the only symptom in interstitial nephritis is the cardaic hypertrophy with the auditory symptoms, but the examination of the urine will generally confirm the diagnosis.

The following is a letter from John M. Crafts, M.D., Cayahoga Falls, Summit county, Ohio, received after hearing me read the above paper presented to the special section named.

"Something more than five years ago my wife began to complain of tinnitus aurium. Had I known what I fully believe since hearing your very valuable paper, I should not have been so long in the dark; but I of course consulted an occulist and aurist of this city, and perhaps the golden moment which might have restored her health was past. Shortly after this first symptom, say three months, she became slightly deaf, at which time large amounts of albumen were forming, and have never been entirely absent, even up to this present time. At present she is very deaf.

[2] *Gag. Hebdomadaire.*

CATHETER BROKEN OFF IN PROSTATIC PORTION OF URETHRA—EXPEDITIOUS REMOVAL.

BY ARTHUR L. WORDEN, M.D., DES MOINES, IOWA.

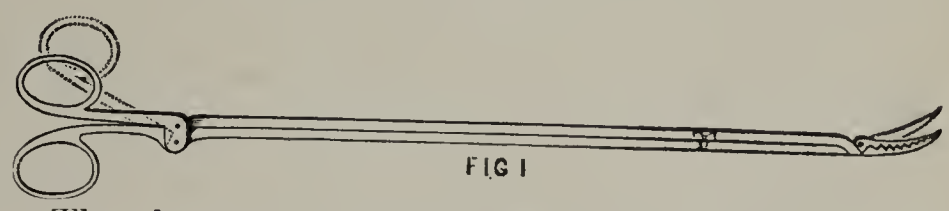


FIG I

The above cut represents an instrument which once helped me out of such a difficulty, without the patient ever knowing what had happened.

I had occasion to pass a soft rubber catheter, No. 11, into the bladder of a colored man. After draw-

ing his urine and attempting to withdraw the catheter, imagine my dismay at having it break off in the prostatic region. Without mentioning the fact to my patient, I immediately passed the urethral forceps, and easily securing a grasp upon the broken end, at once withdrew the fragment entire.

On another occasion I was unfortunate enough to have a pledget of absorbent cotton slip from my application, and remain in the cavity of the uterus. Again my alligator forceps came to my rescue, and I removed the foreign body without difficulty. The blunt end renders it as easy of introduction as an ordinary silver catheter. The cut represents the mechaniim by which the greater part of the instrument is worked by a sliding motion, which in turn opens and closes the short alligator blades. With this instrument a firmer hold may be secured, and the fragment is not so liable to break. The compound silver catheters sometimes break off, and may be easily removed by this forceps, whereas the screw would be entirely useless. The greater safety of the forceps is obvious.

320 Fifth street.

THE OUTERMOST RIM OF NEBRASKA'S FIELD OF MEDICINE--INTRODUCTORY TO THE FOURTH COURSE OF LECTURES IN THE OMAHA MEDICAL COLLEGE.

BY A. S. V. MANSFELDE, M.D., PROFESSOR OF PATHOLOGY AND HISTOLOGY.

LADIES AND GENTLEMEN: Nebraska physicians and Nebraska institutions of learning have within the last year received their share of attention; sometimes gratifying to us, and at others quite contrary emotions were the result of such notices. Of course adverse criticism may have often been just, when, human-like, we smarted under the lash. Again, honest as the critic may have been, yet unacquainted with our faults and our virtues, our past record and our hopes for the future, he did not deal with us as he would wish to be dealt by. One common error is engendered by the idea—universal, I think, east of Chicago—that Nebraska and her institutions, her children and her citizens still bear the stamp of a semi-barbarism commensarate to the products of a soil prolific in thistles and sage brush. Few people, comparatively speaking, seem to be aware of the fact that we find time to pay attention to the important questions of the day; or that our minds are capable of a correct understanding of the issues involved. No calling is exempt from the mighty stirring of the "*Zeitgeist*" (or spirit of the times). "All things are being borne along on a stream of tendency; all things are in process of becoming riper and maturer, of being evolved into higher moods, statics, shapes, and manipulations. The *Zeitgeist* halts never in one shape, but is forever assuming new forms and aspects, is undergoing an eternal metamorphosis. There is no pause nor rest in the process of evolution."

The profession of medicine forms no exception to this order of the universe so aptly put by the sage of old: "*Tempora mutanter et nos mutamur in illis.*" We have our burning questions, of which I may mention: The work of the State Medical Societies; the duties of the State to prevent quackery, and also its obligations to educate physicians; the right of women to study and practice medicine; our ethical laws, and our relations to them; and many more. Want of time will prevent me from doing justice to all of these, or any one of them, yet I have accepted with great pleasure the invitation which gives me a chance to speak, to an appreciative audience, of medicine—not of medicine, however, as I shall present it to the minds of the students who have sought this institution for the purpose of an introduction to Esculapius' daughter—an acquaintance, I assure them, which ere long will ripen into a familiarity of the most cordial kind—nay, I wish to speak to you of medicine as it presents itself to all of us—the living goddess—and we will follow her in her health-bestowing, pain-assuaging, life-prolonging career until we reach with her the outermost rim of Nebraska's field of medicine, noting crefully what we see here indicative of the possibilities of the future.

Centrally, as we look back upon what was then called the "Great American Desert," we behold man in his infancy, lying upon his buffalo robe, talking in the delirium of fever of the evil spirits which possess him, or imagining that he is already enjoying the sports of the happy hunting grounds. Yet in his fever he is not alone; the goddess of medicine is there in her least attractive form, in the person of the "medicine man," who, as always with the primitive races, combines within himself the offices of priest and doctor. He joins his incantations with the stews of the herbs of the field, and the product he administers, *nolens volens*, to the warrior, successfully banishing the spirits or hastening the pleasures of the chase of the beyond. But with the advent of the pale face across the waters of the Missouri, the disciples of Esculapius assume the familiar robe of legitimate medicine.

Twenty-five years have passed over the head of her ardent disciple since, equipped with pill-bag and lancet, quinine and calomel, he planted his sod house upon the western slope of Douglas county. Some of you here present know what is implied in this innocent statement; it means everything that can break the strongest heart; it means hunger and thirst, the vicissitudes of the weather, the war-whoop of the Indian, the howling of the prairie wolf; but it also means the steeling of nerve and muscle, enlargement of the heart until it finds room for all human woes, both of mind and body; it means the capacity to snatch the bread from the mouths of wife and child, to convert it into quinine to stay disease and death of the fellow-pioneer; it means brotherly love put into practice. What a pleasure it is to me to enjoy the privilege to-day of taking this worthy physician by the hand, his head white as decked with the snow of years, his mind filled with the discoveries of to-day, his heart throbbing with the enthusiasm of youth, when he looks toward the outermost rim of Nebraska's field of medicine. He traveled from the center to the circumference. Though loaded down with the honors of his profession, he still marches on with the tread of perfect manhood, hailing the possi-

bilities of the future. Of such is the bone and marrow of the medical profession in our prairie State.

Midway between center and circumference of our Nebraska field of medicine we meet with ten men of the kind just described, ideal types of manhood and of the profession, not only of Nebraska but of all times and countries. These physicians, amid the trials of frontier life, had not lost sight of the demands which their noble profession makes upon its devotees. Right here in your beautiful city (then a small town), on the 24th day of June 1868, they met, for the purpose of erecting a home for the goddess of medicine. They laid the foundation on that day of the Nebraska State Medical Society, and one by one the physicians of the State have sworn allegiance to her tenets, until to-day we see them march, the peers of their brethren anywhere, toward the outermost rim of our field of medicine, one hundred and thirty strong. And on their way they do not loiter idly, but finding plenty of work, they do it joyfully and creditably. The pen and the knife both find skillful hands to wield them, so that to-day Nebraska physicians are heard, through the journals of the country, upon the floor of the American Medical Association, as well as upon that of the Nebraska State Medical Society.

At the last meeting of this body, seventy of its one hundred and thirty members were present. The papers read, both in size and contents, will compare favorably with those of any State Society. The discussions evinced erudition and culture, irresistibly demonstrating that our schools of medicine have done no bad work in turning out such products. At the same time, they point with the hand of fate to the "*mene, mene, tekel upharsin*" which awaits the institutions and their graduates who do not march onward and upward.

But what, in the meantime, has become of the noble ten whose work is so singularly blessed? Three of them did not reach the rim of the field; they fell by the wayside with their armor on, and

> "Their virtues are writ most
> In the memories of those to whom they came,
> Gentle ministers of medicine"

The seven, still living, are yet active members of the State Medical Society, true to their first love. It is with great satisfaction that I can point to four of them as founders of the Omaha Medical College and teachers in this institution. I do not wish to call the blush of modest protestation to their cheeks, yet my weak effort is inadequate to express the influence these four men have had in shaping the prospects of medicine in this our young commonwealth; their noble endeavor has borne fruit of no small proportion,—inestimable when you recollect that their efforts are reverberating in every part of the great Northwest in the deeds of young men and women who took their incentives from these very men.

I would illy understand my fellow citizens, whose hearts swell with pride in the contemplation of their successful labors upon Nebraska's virgin soil, if I did not feel assured before hand that their pardon is mine when, upon this occasion, I earnestly protest against the most delicate intimation that the Nebraska Medical Society, or the majority of its members, evade or seek to abrogate the high principles of the medical profession as defined in the code of the American Medical Association. A society which maintained its existence through drought and grasshopper plagues; a body of physicians reared by the hand of nature's God, in His grand image, self-sacrificing, all loving—I say such a combination of men is too far above small temptation to lose sight for one moment of the principles which are the common attributes of every noble man, of every gentle woman, be they physicians or not. Yet, if it is not the height of arrogance for me to interpose my opinions in this matter, I remind my hearers of the fact that the soil of Nebraska, in its wonderful productiveness, gives birth not only to fruits, varying from those of other States and countries, but the influence of the environment peculiar to this State has already created a people differing materially from their brothers east of the lakes and Alleghanies. Whether we are an improved edition of our brothers and sisters modesty forbids me to decide; but this I know, that we are less prejudiced, more open-handed, more liberal in our views, with hearts quicker throbbing at sight of our fellow creature's sores, and endowed with a larger quantity of charity for their faults than our ancestors who figured in the Boston tea drama or were heroes in the Revolution. If such a statement as this is correct, may it not be possible that our wants are not entirely covered by the Code? May not the gigantic strides, with which we have left the past behind, involve also the handiwork of the last generation of doctors? Or are doctors and the Pope the only infallible beings of this mundane sphere? But, in all soberness, we Nebraska physicians mean to abide by and inculcate the principles of the Code, as we do the laws of our State, reserving the right, however, at the proper time and place to try to amend or change the Code, as we do our laws, if they become inadequate or antiquated.

There is a phase in the history of medicine which very strikingly proves the difference between western people and those east of the Atlantic. Nay, even east of the Alleghanies. I refer to the education of women as practitioners of medicine. From these faint objections from England as voiced in the British Medical Association, "may not habit, may not the erformance of duties, which entail long watching, much exhaustion of mind and body, may they not, will they not so change that fine organization, that sensitive nature of woman, so as to render her dead to those higher feelings of love and sympathy which now make our homes so happy, so blessed?" To an absolute ostracism as practiced by the Massachusetts State Medical Society, an excuse for which action is given in this passage: "It is admitted on all hands that a great many imperfectly educated and incompetent women are practicing medicine in this community, and shall we improve our society by admitting many of these into it?" It is true the new variation of the old tune: "Thus says the Lord," set to the words of Susan Cooledge:—"God has made me a woman, and I am content to be just

what he meant," sang by the gentlemen quoted would shut out all argument, if not happily there were those who have the arrogance to assert that they having an opinion altogether opposite to this, are also, or at least they think they are, interpreters of the language of the living God; and this teaches them in this instance that the facts of nature, of primitive man and his life, and the modern work of woman, incontestibly prove her superior vitality, her greater physical endurance, and in spite of a physical degradation reaching over thousands of years, her finer and nobler instincts of the mind. And now it is claimed that the most ennobling, the highest calling of man, "divine physic, will render her dead to those higher fellings of love and sympathy."

The mere tyro in biology must know that nature has been far more lavish in her gifts to the female side of creation; she has endowed her with all those qualities which secure to her the place of excellence in creativeness. Even prior to her advent, the environment and its influences betoken a greater care bestowed upon the favorite. Greater space for development is allotted to her, and her food is of a choicer kind and more abundautly supplied; therefore; already at the gates of life, she demonstrates the beneficial effects of these causes.

Thus, however loathsome this thought may be to the average male mind, irresistible facts seem to prove the necessity of the more perfect combination of circumstances, all in the direction of superior qualities for the production of female offspring, and since these conditions cannot be said to exist in the majority of cases the legitimate conclusions are drawn that male births preponderate, and secondly that males have not the vitality that the female enjoys by reason of her superior developmental advantages. Further, it is a fact patent to every observant physician that the resistance to disease is by far greater in females than it is in their brothers. Whence then the infallibility of the *dixit Dei*, that by reason of their organization women are not to be compared with men as to their fitness to practice the healing art? "May not the performance of duties which entail long watching * * * so change that finer organization, that sensitive nature of woman," etc.

Nowhere in the life history of woman, of those women who have been, and have furnished the brain and marrow of nations (others are of no account), can data be found which would even approximately justify such predictions. Look down the vista of years until, in the mists of the first centuries of the Christian era, you see the female moving about in her domestic relations and duties in the forests of Germany, your and my ancestors—are you not surprised at the similarity of the picture presented to your eyes to one which has often enough met them when taking in the panorama of an Indian village? —the same Lord of creation (?) then as now demonstrating the inferior physical endurance of the female by putting it to such tests as carrying wood and water, tilling the soil, and in fact doing and enduring everything. Shall we go farther back and contemplate the scenes transpiring in the home of the Alalus. Where, to the equal work of rearing and protecting her offspring, protecting it against enemies compared with whom colic and the thrush are but pigmies, the gigantic beasts of her sylvan abode or her lagunan fortress prove fit antagonists to the physical strength and endurance of this our primeval mother. And as the ages have rolled on upon the sea of time we find woman upon the battle-fields of Herman and Varus, battle-ax in one hand and soothing draught in the other, urging man to victory or ministering to his wounds, until in this latter half of the nineteenth century, she, still true to her instincts, proves the heroine and the angel of mercy on the battle-fields of Bull Run and Chattanooga. The characteristic sign in the history of man has ever been progress; from his anthropoid kinship to his present civilized relations, he has ever evolved better, greater things, *and woman was his mother always!*

She has not only kept apace with him, but has given the impetus to every good in him and coming from him, until to-day it is claimed, "that she may be rendered dead to those higher feelings of love and sympathy, which now make our homes so happy, so blessed," by preparing to do to perfection, what she has practiced instinctively since man was wounded and babies took sick.

Woman must have a power of resistance truly wonderful, that she still, after ages of such experience, can be spoken of as having "that fine organization, that sensitive nature." To suppose, then, that the noblest, most exalted of callings, the practice of medicine, should do that for her which the degradation of thousands of years has not accomplished, is asking too much of our credulity.

When, therefore, the Secretary of the Nebraska State Medical Society was ordered to cast the vote of the Society for the first female physician who applied for admittance, *not one voice was raised in objection!* —Nay, an enthusiastic member, foreseeing the pleasure and the profit of marching toward the outermost rim of our field of medicine in such good company, moved the remission of all dues—which privilege was promptly, and very wisely, I think, declined. Women want but one privilege; equal opportunities. The Nebraska State Medical Society and this institution have, by their actions, admitted the justness of the demand; and as long as I am a member of either, I shall guard their rights with a zeal equaled only by my love for my profession. The physician and teacher who cannot breathe freely and speak with becoming dignity and modesty in the presence of woman, be she a physician or a student of medicine, or neither, is not only not fit to enter the chamber of sickness, but his mouth is not clean enough to utter one word in behalf of medical science. Happily, I have not seen one such poison weed spring from the soil of our prairie State. To the contrary, we take good care of the plant, yet young in years, well knowing what Nebraska can do in the way of growth.

Marching now in better company toward the rim of Nebraska's field of medicine, which we have almost reached, we halt in view of this building, over the entrance of which we read Omaha Medical Col-

lege, and since "fools rush in, where angels fear to tread," we wisely halt, and listen to some one in the rear who says warningly:

"For our part, however, if we could be convinced that legislative codes of ethics had efficacy, we should advocate one that made it not only an ethical offence, but a medical crime, to establish cheap, two-term schools, ostensibly for the convenience of the community, but really for the aggrandizement of local physicians. We shall gladly welcome and support any new medical college, Western or Eastern, which honestly undertakes the higher medical education. Such colleges are indeed needed; but to say any part of our country wants more of the ordinary kind o-cheap-John educational diploma factories, is a monf strous excursion from the limits of the actual." Another voice is heard: "The medical school at Omaha is fairly established, as its promoters inform us, but the position you took toward the same was undeniably just."

Now I can vouch for the fact that the first speaker is from New York, and he has no time or inclination to enter with us this building. The last speaker, if it can be possible that he breathes Nebraska air habitually, which I doubt, is neither a good citizen nor is he willing to abide by facts.

Let us see. You are all agreed that the most vital interests nearest the heart of every good citizen must be the education of his children—an education which will prepare them to take their share in the work which makes society possible, and which in its effects perpetuates the glorious privileges of American citizenship. The achievement of such results must be the aim of our government, that of State and Union; yet it does not follow that a good physician, a learned attorney or a perfect preacher are units of vital moment in our State however much the individual may be in need of their services; but the man and the woman whose education enables them to abide by the laws of their country because such laws are to them evidence of a higher civilization—such persons are indeed indispensible parts of our commonwealth, and in the rearing of such alone the State is interested. Nebraska must not educate physicians and lawyers, but citizens; yet she would not deserve a place among the other States of the Union did she not likewise foster science and letters upon her soil. It is time that her sister States should realize that she is capable of products higher in the scale of the world's market than corn and cattle.

When we demonstrate our inability to accomplish this, it is time for those who have been more fortunate in their endeavors to "come over to Macedonia and help us." In the meantime no such cry of distress is heard, and any insinuations that this school is established upon the narrow basis of personal aggrandizement, point only to a mirror reflecting self in its most hideous form. Assertion to such people of pure disinterestedness on our part are out of place. Facts must be brought forward, if not to covince, at least to hush their unjust criticisms.

Modesty forbids me to compare the faculty of this College with those of like institutions in the East; but it may be opportune to speak of our hopes for the future, sustained, as they are, by the products of the past, to which we point with pride in the persons of our graduates. Our position is the one the Rev. Horatio Stebbins', paraphrased thus: "Show your man; that is the real test of teaching"—and we are not afraid to show our graduates.

I voice but the feeling of all of us; in quoting from letters received but a few days since from one of the faculty, who says: "No man can be properly prepared for practice by two courses of only four or six months, and no professor, however great his ability, can do his subject justice in the short time now consumed in obtaining a medical education. We must cram the students from beginning to close of session, and then apologize because a numbers of important subjects have been unnoticed for want of time. * * * I am rejoiced that you so heartily concede with me in reference to medical education. While three courses of lectures give the students greater time for study and reflection, this plan does not give the lecturers any more time to go over their field; but a nine months' course will be advantageous to both professor and students. I am strongly in favor, therefore, when the time arrives, to make the change and adopt the latter." That Eastern schools, nearly all of them, are in the same position, facts demonstrate. Then what do they want? They call the West fast; is there not great danger that we will give another exhibition, ere long, of the truthfulness of this charge?

Truly, the medical profession of Nebraska, its teachers and students, obey the impulse of the age, not the "spirit of boom," however, but the powerful stimulus given by scientific research and progress. We do not lag behind, but march abreast with our peers elsewhere.

The outermost rim of Nebraska's field of medicine, bright as it may appear to us, is yet studded everywhere with outposts, eagerly looking for new truths, new discoveries upon this ever-widening field, and beyond it they behold in the dawn of to-morrow medical science, art and letters cultivated by skillful and loving hands, and grown to proportions of which our imagination can draw no picture. To-day Nebraska with her half million people is yet in her boyhood, playing with her possibilities as innocent childhood with a rattle; but to-morrow with her fifty million inhabitants she will feel her manhood, and then science and art and letters will receive the lion's share of attention.

We of to-day shall never behold this glorious consummation, yet in our several spheres we feel the importance of our lives as factors in the realization of the achievements of futurity. If we are but modest laborers carrying only brick we feel that these are needed to build the grand temple of Nebraska's greatness. And if in the recesses of our hearts a hope finds food that our honest endeavors in this institution may yet be crowned by the turning out of a corner-stone here and there, who shall dare to bid us crush it from our breasts?

Nay, teachers, students, and friends of this institution, all will combine to make this college a monument of individual pluck and Nebraska enterprise;

and when the outmost rim of Nebraska's field of medicine has advanced many leagues from the shadow of its walls, may it still stand out in bold relief as a mile-stone, marking the progress of scientific medicine. Then gone to our rest, our children will say with Goethe —

"Bold was the endeavor,
Splendid the pay."

MEDICAL PROGRESS.

COLORING MATTERS OF THE URINE IN MICROSCOPIC EXAMINATIONS.—Dr. C. Méhn. (*Annales des Maladies des Organes Génito-Urinaires.*) Some five years ago Dr. Méhn suggested the use of a saturated solution of ammonium sulphate to precipitate urobiline and other biliary pigments from slightly acid solutions by which process he readily separated the pathological coloring matters of the urine, also extracting the fatty matters from the so-called chylous urine. The present article treats of a method of re-dissolving these substances to facilitate the examination of urinary sediments. For this purpose he uses the ordinary sodium phosphate of pharmacy, in a cold saturated solution, which dissolves readily the ordinary bile pigments which can anew be precipitated by the ammonium sulphate. To relieve the anatomical elements of the pigment which obscures them, a few drops of this solution added cold, in a few moments re-dissolves the pigment and the urates so as to allow of an easy microscopic examination. An excess of the re-agent seems to present no inconvenience. Many urines are so charged with coloring matters that on cooling form a thick coloring of alkaline urates, of uroérythrine, of urobiline, etc., over the anatomical elements which renders them unrecognizable. The leucocytes, spermatozoa, tubecasts, etc., lose their definition. In rheumatism, pneumonia or febrile affections the brick-dust sediment of the alkaline urates which forms on the cooling of the urine, is made to disappear on the addition of a few drops or grammes of the sodium phosphate solution, and thus allow of a clear definition of the anatomical elements.

The addition of a small quantity of sodium phosphate does not interfere with the subsequent quantitative analysis of uric acid, when the microscopic examination is concluded, it is only necessary to reunite the decanted liquid and the sediment, and add hydrochloric acid to find the uric acid precipitating gradually. Dr. Méhn concludes from these facts and from practical observations in the treatment of cases that sodium phosphate in doses of from two to five grammes per day, in cases of icterus and others where the urine is loaded with urates and bile pigments, will produce a beneficial effect and can be used where the alkaline mineral waters, such as Vichy, etc., are not tolerated.

THE HYDRO-AERIAL CATHETER.—This instrument has been described in the *Encyclopédie Internationale de Chirurgie* (t. 11, p. 247, June, 1883), and consists of a hollow sound which admits the passage of a filiform bougie. At its superior extremity it terminates in a metal tambour, to which is attached a thin rubber cylinder, shaped like a glove finger, pressure upon which, with the sound in the urethra, would exert considerable air force. In addition, a reservoir of water communicates by a tube with the metallic tambour, and thus with the cavity of the sound. The sound can be readily detached and bougies of various sizes introduced. The object of the apparatus is easily understood; it is to overcome urethral obstructions by the simultaneous use of a bougie and hydraulic pressure; in this way obliterating obstacles due to mucus folds, to fungosities, and to flexures of the urethral canal. In urethral spasm, the continued hydraulic pressure, so regular and innocuous, masters the energetic contractions which the use of instruments so often merely exaggerates. The inventor, L. Duchastelet, in the *Annales des Maladies des Organes Génito-Urinaires*, Aug. 1, has given four cases in detail where this instrument was used to great advantage.

CLONIC SPASMS OF THE UTERUS DURING THE PERIODS OF GESTATION AND OF LACTATION. Dr. Nozeran. (*Gaz. Hedomadaire des Sc. Med.*, Aug. 25.) This writer describes the case of a woman 30 years of age, of a lymphatic nervous temperament, vigorous constitution, and slightly chloro-anæmic. No history to utilize. During her second pregnancy, at the second month, she was taken with a series of disordered, irregular, intermittent movements in the abdomen, which continued less frequently at night; they differed in character from fœtal movements, and continued throughout the pregnancy and subsequent lactation, ceasing only at the period of weaning. The spasms were so violent at times as to waken her husband when he slept by her. Her third pregnancy was marked by the same phenomena, and she first consulted the doctor while nursing this child at five months, which was well nourished. On making an examination, Dr. Nozeran found the uterus to harden as in the commencement of a labor-pain, raising its volume by disordered and very violent movements, as if influenced by galvanism. It was easy to determine that the muscles of the abdominal walls took no part in this spasmodic movement.

The doctor lays stress upon two points in this case:

1st. The existence of uterine spasms independent of the will, occurring during pregnancy, without hastening the term of pregnancy or interfering with its normal evolution, spasms compatible with perfect health.

2nd. The resistance of this essentially neuropathic condition to antispasmodic treatment.

The treatment which promised the best result was that of mechanical compression, but the patient would not submit to it long enough to obtain relief.

DEVELOPMENT OF AN ERECTILE TUMOR DURING PREGNANCY.—M. Larzam, *Union Med. de la Scie Infeneure*, No. 71.—Mme. G. presented at the fifth month of pregnancy a pimple of the size of a small pin's head on the extremity of the nose, remaining

stationary a month. At the end of that time, at the request of the patient, and believing it to be simple acne, it was cauterized lightly with nitrate of silver. Afterwards in washing the face the scab was rubbed off and a hæmorrhage ensued which it was difficult to check. The blood was projected by intermittent fits several centimeters distant from the nose. From that time the tumor developed, forming an appendage of about a centimeter in thickness and 75 millimeters in length, of a light red color and easily reduced by pressure with the fingers without any pulsation—being evidently an erectile tumor. It was not further interfered with, and the day after delivery at times was paler and less prominent. The following day it was much diminished in size, and at the end of six days it was hardly visible—soon after disappearing altogether.

On the Consolidation of Fractures in Cases Diabetes.—M. Verneuil, *Bulletin de l'Acad. de Med., Paris*, No. 30.—M. Verneuil gives three cases in detail where the presence of glycosuria was determined in connection with fractures, and where the separative process which results in consolidation was seriously impeded. The first case was a compound fracture of the left arm in a workingman of 35 years of age, sober and of regular habits. In this case four months elapsed before consolidation was established. The second case was a fracture of the neck of the humerus, where union was apparently satisfactory, and the patient left the hospital to return suffering from another injury of which he died in two days, but which had no connection with the fracture of the humerus. The autopsy made more than three months after the receipt of the fracture, disclosed simply a provisional periostitic callus thrown out about the seat of fracture. The third case was a simple fracture of the forearm in a man 54 years of age, whose urine contained 79.60 of sugar per liter. The sugar disappeared under treatment in about six months; but, while there was no displacement or deformity at the seat of fracture, there was no consolidation.

A fourth case is recited of fracture of the lower extremity of the left radius, where, owing to the marked absence of pain, the urine was examined and sugar found to be present, 6 gr. 30 per liter, M. Verneuil having previously noted that anæsthesia was marked in the foregoing cases of fracture in diabetic patients. In this case a perfectly satisfactory result was obtained after the usual lapse of time, and the diabetic symptoms disappeared.

In summing up his cases M. Verneuil considers the fact that first case was one of compound fracture, does not influence the result, as the inflammation was superficial. That as regards the condition of general health, while in two it was poor, in the third it was excellent. He considers the fact thus established adds one more to the causes which retard or prevent the consolidation of fractures. All surgeons know that wounds in diabetic patients become very often the point of departure of serious accidents and the seat of various local complications. Union by the first intention is rare, and secondary union is slow and tedious in simple wounds, which fact has more than once caused an examination of the urine and determined the presence of diabetes, which had previously been ignored. The formation of callus is only a variety of the general traumatic process, and is subject to the same influences. The fourth case was the subject simply of an ephemeral diabetes, and was much less dyscrasic than the three others.

As regards the various theories in explanation of the genesis of diabetes, M. Verneuil considers his cases favor the views of M. Boushard, who classes diabetes among the diseases due to a diminution of nutrition. The reparation of wounded tissues is a form of nutrition. This reduces the subject to three propositions:

1st. The delay and absence of consolidation, as shown in three cases of fracture, seem to be due to a dyscrasia simultaneously recognized—that is to diabetes.

2nd. This delay and absence of consolidation implies necessarily a diminution or suppression of reparative force, a particular form of nutrition.

3d. Whence it is permissable to conclude that diabetes, when it checks or prevents the formation of callus, influences at least, if it does not cause it directly, the diminution or the suppression of nutrition.

The Use of an Elastic Respirator to Relieve the Dyspnœa of Pulmonary Emphysema.—Prof. Bazile Feris describes an apparatus in the *Bulletin Gen. Therapèutique*, etc. (August 15), which is nothing more nor less than a slightly modified double hernia truss, the pad for the back being enlarged and made less prominent, and the hernial pads also being made to extend over a greater area of surface. The metal springs as arms pass under the axillæ, and the hernial pads exercise pressure over the pectoral muscles and the ribs, while straps retain the apparatus in place. The writer claims that patients are enabled by this apparatus to take full and proper inspirations, while expiration is assisted and made complete. It can readily be worn under the clothing without being noticed. Prof. Feris has used it in thirteen cases of emphysema with marked benefit. He cites of case where a patient was using temporarily a hernia truss until the properly adjusted apparatus could be made for him. Desiring to go from the hospital into town for the day, and the truss having a clumsy, prominent appearance, he left it off, but had gone but a short distance when his dyspnœa forced him to return, with the aid of a friend, and replace his apparatus, with which he again passed out, and did not return for seven hours.

The spirometer used in these cases has shown that the amount of air passing into the lungs was markedly increased. The respiratory movements are also diminished in number, and the greatest benefit was obtained when the pads were placed over the first and second intercostal spaces. The paroxysms of asthma become less marked and less frequent. The emphysema, when localized, shows less tendency to extend, and the blood of the pulmonary artery circulates more readily through the small vessels, thus relieving

the right side of the heart. It requires a certain time to get accustomed to the instrument, but not more so than with a truss.

IODOFORM POISONING.—Dr. Pick gives two cases in the *Deutsché Medicinische Wochenschrift* for July 25. The first occurred in a bricklayer 43 years of age, well nourished but of a highly scrofulous family, who suffered form an abscess, the result of caries necrotica of the sixth rib, which was laid open freely and the necrotic rib removed, the wound scraped with a sharp curette, cleansed with a five per cent. carbolic acid solution filled with crystalized iodoform, and closed with sutures. It healed partly by first intentions. At the lower portion there was a small discharge of odorless secretion partly mixed with iodoform powder. After the lapse of a few weeks, the wound seemed to close and the patient went about his business. Suddenly the wound broke out anew, and was again sprinkled this time with powdered iodoform. Ten to twelve days later the patient began to complain of lassitude and want of appetite, which was soon followed by vomiting and purging with a marked distention of the abdomen, The temperature was normal, pulse accelerated. Suddenly active delirium set in. The patient constantly sprang out of bed, wanted to go into the street, poured the contents or the urinal about the room, tore off his dressings, etc. He recognised his physicians, but talked at random. The temperature was not increased, the pulse was much accelerated. The urine contained albumen and was markedly loaded with iodine—(in 660.0 of urine was shown 0.024 of iodine). The iodoform was immediately removed with the greatest care. The delirium did not return, but it left the patient in a condition of melancholy, and remarkably rapid emaciation. After a few days he complained of pains in the back, which proved to be caused by exudative pleurisy of the right side. He died soon after the appearance of the exudation. No autopsy.

CASE 2.—An unmarried woman of 40 years of age, sickly from early life, suffered from caries of the right forearm, etc., moderately well nourished. She was operated upon for the relief of lupus faciei, which, on the right cheek, for the greater part showed cicatrics, on the left cheek four large spots resembling abscesses and filled with soft lupus tissue. About two-thirds of the nose was transformed into an ulcer with superficial scab while the right ear had also two deep ulcers. Cod liver oil internally, iodoform vaseline (1.5, later 1.1) externally to the nose and ear. The pustular lupus nests on the left cheek were laid open, scraped with the curette and filled with crystalized iodoform. While the nose and ear showed decided improvement, new proliferations appeared at the points operated upon. An operation under chloroform was then performed, removing completely the pustules of the face and nose. The wounds were thoroughly sprinkled with crystallized iodoform and salicylated wadding placed over them. In the afternoon frequent vomiting ensued, continuing for three days, with it headache and complaints of the taste and smell of iodoform, which later was supposed to be due to the iodoform nasal injection. The third day the application was repeated. Now a severe diarrhœa set in, the teeth, gums and hard palate were covered with a tough, yellowish pellicle, which could be removed by piecemeal through the aid of dressing forceps; the tongue was also covered and very dry, the appetite was entirely lost, the voice was whining, but the sensorum comparatively clear, sleep was totally absent, rapid and remarkable loss of strength, pulse small and accelerated, temperature between 38.5 (morning) and 39.4 (evening), urine diminished, thickened and undoubtedly containing iodine. About the fifth or sixth day the patient complained of severe pains in the left side that were increased on moving the correspondingly. As the cause of this, there appeared a cord-like, about two and one-half centimeters long, induration at Pouparts ligament. Also a swelling was found the size of a bean in the left popliteal space which was painful on pressure.

On the sixth day the iodoform was carefully removed from all the wounds. Gradually the fever diminished and there was a slow general improvement, the diarrhœa and meteorism continued for six or seven days longer. On the evening of the sixteenth day of convalescense a totally unexpected but severe rigor appeared, followed by profuse perspiration, small pulse, which could hardly be counted, and a temperature of over 40°. The sensorium was clear The following morning the temperature was 39, the patient had slept pretty well and felt better. Convalescense now continued steadily, and in five and one-half weeks the patient, emaciated almost to a skeleton, left her bed for the first time. At this time there was still some pain in the left nopliteal space, where there was a hardness some centimeters long of the thickness, but not very painful on pressure. The left part was also slightly swollen. These conditions disappeared in the course of the next week.

Sometime after a new operation was performed without chloroform, but the iodeform applications were renewed, when on the following day the patient complained of loss of appetite and of feeling badly. This becoming more marked on the third day, the iodoform was carefully removed, resulting in a perfect relief of the symptoms. Again the operation was performed without the use of the iodoform, and the next day the patient was fully able to attend to her household duties.

IODOFORM INTOXICATION.—P. J. Hays, F.R.C.S.E., gives us a case in the Dublin *Journal of Medical Science* for August, which is interesting in connection with the foregoing cases of Dr. Pick. The condition occurred in a man 23 years of age; slender frame; temperate habits, and a field laborer. He suffered from an abscess two inches below the inferior angle of the right scapula. Fourteen ounces of pus were evacuated by aspiration. The abscess refilled so rapidly that it was opened, a drainage tube inserted, and 60 grains of iodoform introduced, and repeated four times at intervals of two days. On the evening of the fourth application, the patient developed alarming

symytoms; he became delirious; his temperature rose to 104° F.; the pulse rate reached 120 in the minute; lay in a stupor, mouth open, pupils dilated, sphincters relaxed, tongue dry and brown, no vomiting, marked impairment of muscular power, mind obscured. This condition continued for five days; then a sharp attack of diarrhœa occurred, and the patient's condition underwent a change for the better. He evidently began to recover consciousness, although he continued to present a dazed aspect; and whenever the doctor approached his bed he endeavored to assume an all-four position, resting on his hands and knees, as though he expected his back was to be dressed. From this time his progress was satisfactory, and by the eleventh day from the development of symptoms he seemed to be free from traces of iodoform intoxication. The urine was examined. The sp. gr. was 1036, the urine being concentrated and scanty. Neither sugar nor albumen could be discovered, but the reaction characteristic of the presence of iodides was readily obtained.

In the discussion of this case Mr. Hayes adopts the views of Hagyes on the absorption of iodoform by raw surfaces, that fatty matters exposed in the wounded surface serve to dissolve the iodoform, and so prepare it for absorption. Then the compound having entered the living tissues in a state of solution, the iodine in great measure separates from carbon and hydrogen, and combines with albumen, constiuting an iodide of albumen, which can be readily conveyed to every part of the organism. Iodoform seems to possess cumulative properties, but the work of elimination by the excretory and other organs (kidneys and salivary glands) commences early. According to Martin, iodides can be detected in the urine some hours after application of the first dressing, and their amount bears a direct relationship to the quantity of iodoform absorbed. To test for iodides in the urine, a little chloroform is first added to the liquid, and then a few drops of nitric acid. The iodine set free causes a fine red amethyst coloration of the fluid. This must be done before ammoniacal decomposition, and care must be taken to avoid an excess of nitric acid.

On the Use of the Cauterizing Ecraseur Forceps in Hæmorrhoids.—The use of this instrument, which is the invention of Prof. Richet, is very fully described by Dr. Bazy in *La France Medicalé* for August 23. The instrument itself resembles in shape the curling-tongs of the hair-dresser, except that its branches are thicker, and their opposing surfaces are channeled at their free extremity for about three or four cent. In its use, a portion of the hæmorrhoidal mass is drawn out by a tenaculum passed in deeply, and copper wire carried through the base of the part so exposed, thus forming a solid and resisting handle with which to control portions of the tumor. This is continued by two or three more of the copper wires, according to the volume of the tumor, the circumference of the anus being protected by moist compresses. This done, the surgeon draws upon one of the wires, producing a sort of pedicle, which he squeezes between the branches of his heated forceps until they meet. The copper wire remains in his hand, and the hæmorrhoidal mass is but a blackened band as thin as paper. This mode of destroying hæmorrhoids has sometimes been given the name of *volatilization*. The same process is gone through with each of the other wires. When finished, the anus shows alternate radii of cauterized bands between the untouched tissue. Hæmorrhage is always slight, more before than after the operation, and due to the use of the tenaculum and needle. It is readily arrested by the cauterization, which follows on the use of the forceps. The next day the parts present an inflamed, swollen appearance, from the tumefaction of the uncauterized portions, which are slightly painful, but may be larger than the original mass. But there is no general reaction, and the inflammation is moderate; in exceptional cases it may be controlled by moist, sedative applications. Dr. Bazy has never seen an abscess follow the use of the instrument. In from four to eight days the inflammation subsides completely. The eschar falls off, leaving healthy looking bases, and in three weeks the cure is about complete.

This cauterization destroys the vascular circle of the inferior extremity of the rectum, interrupts its continuity, separates the vascular trunks from the rest of the circulation, and favors obliteration. But the most important result obtained is through the secondary inflammation. This, which is nearly always plastic, produces an adhesive phlebitis, which obliterates the veins, and at the same time causes a peri-phlebitis, which converts the parts not reached by the cautery into a fibrous tissue, in which a relapse is impossible. This tissue, however, is sufficiently extensible to allow of a proper dilatation of the anus during defecation, with sufficient tonicity to close the anal orifice completely. This occlusion has been produced in cases where, before the operation, the habitual protrusion of the hæmorrhoids has relaxed the sphincter so far as to permit of the easy introduction of two or three fingers.

Deodorization of Iodoform.—M. Tourmont has given the following formula for this purpose to the "Societe Pharmacologique d'Emulation." (*See France Medicalé*, Aug. 12.) 1 acid phenic cryst. 1 gramme; Iodoform 10 grammes Powder and mix intimately.

In this mixture the odor of phenol completely sup plants that of iodoform, which does not seem to be altered.

2 Iodoform.....	100	grammes.
Essence of mint.....	5	"
Essence of orange flower,	1	"
Essence of lemon.....	2	"
Tr. of Benzoin.....	2	"
Acetic acid.....	1	"

Powder the iodoform, mix it intimately with the essences, tincture and acetic acid, and place the mixture hermetically sealed in a flask, into a water bath to remain for two days at a temperature of 50 to 67° C. It gives a very agreeable and persistent odor, similar to cologne water.

3 camphor, 5 grammes; wood charcoal, 10 grs.; iodoform, 16 grs.; powder and mix.

4 camphor, 5 grs.; essence of mint, 2 grs.; iodoform, 15 grs.; powder and mix.

(*Holzwolla*). WOOD WOOL, A NEW SURGICAL DRESSING.—Prof. Bruns, of Tubingen, recommends us to use finely ground wood, such as is obtained from the pinus picea, which is pressed, passed through a seive, dried and impregnated with a solution containing half per cent. of sublimate and ten per cent. of glycerine. It is a clean looking, delicate fibered, soft, yellowish white substance, having an odor of fresh wood, and "extraordinarily cheap," is exceedingly elastic even in thin layers, so that bandages can be put on more tightly with this than with any other dressing. Its absorbent properties are so high that it takes up twelve times its own weight of water.

In his own clinic his mode of dressing is exceedingly simple. After the wound has been disinfected by copious irrigation with a one per cent. (?) solution of sublimate, and the drainage tubes have been placed in, the suture line is covered with a layer of glass-wool. Upon this is placed a sufficient quantity of wood wool, either simply wrapped in sublimate gauze or sewn up in the form of a pillow, covered by a larger one that will widely overlap this in all directions, the whole being fastened on by a firm binder. In four months time, 180 operations, and wounds were treated, the majority with wool-wood, the first dressing, with few exceptions, remaining from one to four weeks untouched. Occasionally patches of moisture were visible on the earlier days, but in a short time these became dry and remained so, and when the dressings were changed the wounds were absolutely dry and free from irritation, with the exception of one case of erysipelas. No complication was observed throughout. (*Medical Press and Circular*, Aug. 29).

TURPENTINE IN SECONDARY SYPHILIS AND IN PHAGEDENIC SORES FOLLOWING FEVER.—A writer (Deputy Insp. General Brinsley Nicholson, M.D.) in the *Medical Times* and *Gazette*, for Sept. 1st, recommends turpentine very highly in syphilitic plagues, giving a drachm twice daily in an emulsion made with liq. potass, and two ounces of water. He cites two cases of perfect relief, but fails to relieve orchitis or fibers (suppurative and non-suppurating). In the phagedenic sores following fever. He cites one case in a boy of ten who had passed through an attack of continued fever, when during a tedious convalescence two sores appeared, one over the right trochanter and the other over the left thigh. They soon became phagedenic and were treated locally by various applications, without much effect. Twenty minims of turpentine were given twice daily, with the effect of gradually producing a more healthy appearance in the sores. The treatment was stopped for a time under the charge of another practitioner, during the absence of Dr. Nicholson, but renewed at his return, and the patient eventually got well. While these statements are interesting, the cases are not recorded with sufficient accuracy as to details to warrant positive conclusions.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, OCTOBER 6, 1883.

CONTRACT PRACTICE AND ETHICS.—In the department for correspondence in this number of the JOURNAL will be found a letter from Dr. J. W. Russey, of Georgia, making a plea in favor of contracts for ordinary practice under certain circumstances mentioned in the letter. Dr. Russy writes in a spirit of liberality and candor, worthy of general imitation; and as his plea is probably the best that could be made in favor of any kind of contracts for the performance of ordinary medical and surgical practice, he will not think us unkind if we analize and examine briefly the basis of that plea for the general good. The essential features of the case are as follows:

1st. A corporation employing a large number of workmen levy a per capita tax, or, in other words, retain a certain percentage of each man's wages for the purpose of paying a physician a stipulated salary per month or year, in return for which he is to promptly attend "all or any employes who may be injured or fall sick while engaged by the company." Such is the contract. 2d. The facts which are alledged to justify it are, the large percentage of the laborers who are opposed to paying anything for medical or surgical attendance, though very far removed from the pauper class, and yet they are the ones that have the most sickness. Consequently, without a contract with the company, the physician who should attend them would get very little pay for his services. Furthermore it secures to the afflicted prompt and early attendance which is a great advantage to all the parties concerned.

From a disinterested standpoint several questions arise. 1st. Is there any justice and propriety in taking a portion of the wages of intelligent, prudent and upright laborers, who in the nature of things, and as stated in the letter, furnish only a small part of the sickness, and use it for the benefit of the ignorant, heedless and vicious who are working side by side with them. ? 2d. Is it right or just by imposing a tax on the first named class of laborers to pay some one physician selected by a corporation or company, to constrain them to the employment of such physician whether they have confidence in his skill and fidelity or not ; or if they choose another to suffer the additional injustice of contributing to the salary of one physician and paying another full fees for services to themselves and their families? Instances of this kind have come under our observation many times. 3d. Is it just to his neighboring physicians engaged in practice, to make a contract with a corporation or company for a specified salary to do an undefinable amount of ordinary medical and surgical service for a large class of citizens, whether laborers or not, without fees from the parties receiving the service, but for which they are taxed in such a way as to make it decidedly for their pecuniary interest to employ him only ? Is it quite fair to accept a relation professionally, by which, if your brother practitioner happens to be called to one of the laborers covered by your contract, he will be almost certain to be dismissed very soon on the allegation of his neighbors, that it would be very foolish for him to continue to employ and pay Dr. A when he was *entitled* to the services of the contract doctor, B without charges? Finally, 4th. If it is desirable on account of the improvidence of some of those they employ for companies or corporations employing a large number of laborers to make some provision for securing prompt and adequate medical and surgical attendance upon such as may be sick or injured ; and if is proper to retain and appropriate a percentage of their wages for that purpose, would it not be altogether more just both to the individual laborer and to the members of the medical profession if the amount retained from each individual was placed to his credit, and paid out only for medical services rendered to him or his family, leaving him to choose his own physician, and the latter to make only reasonable and ordinary charges for service actually rendered. And on final settlement each workman should receive whatever balance remains unexpended of what had been retained from his just earnings.

We think a fair consideration of the foregoing questions must inevitably develop the fact that the contract system, as represented by our correspondent, is positively unjust to the better class of laborers; very unfair to the profession at large; and unnecessarily because the benefits sought can be obtained by other methods more consistent with the principles of justice and equality in their application to all the parties concerned.

Progress of Infectious Diseases.—While the prevalence of cholera in Egypt and India is decreasing, and the danger of outbreaks of yellow fever in our Southern and Southeastern ports daily diminishing for the present season, a marked increase in the prevalence of typhoid fever is taking place in New York city and its suburbs, as well as in many other cities and sections of the country. The Sanitary Superintendent of that city states that up to the 1st of September of the present year there had occurred 539 cases of the fever, while for the same period of 1882 the number was only 304. No satisfactory explanation has yet been given concerning the cause or causes giving rise to the increase of typhoid fever in New York city or its vicinity.

Collective Investigation of Disease.—In a recent number of this journal, we explained the system of collective investigation adopted by the General Committee of the British Medical Association, and gave in illustration a specimen of the circulars and of the blanks for return of answers, together with the fact that the American Medical Association had been invited to co-operate in the same line of investigation, and that the proposition was referred to a committee for consideration. Wishing to test the practicability and value of co-operating with the work in Great Britain, by using circular notes, questions, and blanks for returns so nearly identical that the results will be strictly comparable, the American committee has commenced correspondence with that of the British Association, with a fair prospect of harmonious action. And it will facilitate the work if such members of the American Medical Association engaged in active general practice, in any part of the country, as are willing to engage personally in making collective investigations, will send their names and address to the editor of this journal within the next thirty days.

DOMESTIC CORRESPONDENCE.

IONIA, MICHIGAN, }
Aug. 19, 1883. }

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Dear Sir:—As we have now an organ of the American Medical Association in the interest of scientific medicine, I take the liberty to send you a few lines in regard to the status of the medical profession in this section of the State of quacks. As most of your readers must already be aware, this State until quite recently, has had no law regulating the practice of medicine, and this law is as good as nothing; so that it (the State) has become the recepticle of many of the quacks that have been driven out of other States by statutory, enactments. Our liberty-loving legislators some years ago established chairs of homœopathy in our university, thus giving charlatanism the stamp of legality. Homœopaths are put in the service of the United States as pension examiners, and endorsed by the chief medical officer of the pension depatment, who claims to be a regular of the deepest dyc. We could stand all of that, but graduates of regular colleges meet professed homœopaths in consultntlou. One of these from the city of Grand Rapids makes no distinction between physicians let their title be what it may—so he gets his consultation fee all is lovley. Some of the physicians in this city are doing the same thing, and yet are members of our State Association and of the American Medical Association. Recently there has located here a physician wbo graduated at several of our best colleges—College of Physicians and Surgeons, of New York, among others; University of Edinburg—and last wtnter took the degree of M. R. C. S. England, who now consults with a homœopath, supporting his course hy the Beeconsfield case and of the New York heretics.

These are called hy the public liberals and humanitarians. There are too many of so-called liberals in tbe regular professlou, and I am afraid if all should be excluded from the American Medical Association who break the code of ethics by consulting with irregulars, the Association would be bereft of many of its mcmbcrs. One of the greatest hindrances to relegating these *regular* quacks to their proper place, (with the hordes of irregular characters), is want of organization among scientific (regular) physicians. Thanks to the efforts of a few straight-haired physicians in this section of our State, we have organized a society under the auspices of the American Medical Associatiou which promises to do effective work both scientifically and ethically. It is called the Union Medical Society of Northern Michigan, includes Ionia, Mount Calm and Macasta counties. It now numbers nearly 50 members. I hope the day is not far dlstant when medical gentlemen calling themselves regular physicians will haye backbone enough to refusc to meet in consultatiou quacks of all kinds.

Yours, etc.,

"ETHICUS."

CONTRACT PRACTICE AND ETHICS.

RISING FAWN, Ga., Sept. 27, 1883.

PROF. N. S. DAVIS, CHICAGO, ILL.:

Dear Sir: In the editorial department of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, of September 1st, is an article, "Contract Practice and Ethics." After reading that article I felt myself to be in a peculiar position.

In the first place, I have always been, so far as I was aware, a staunch advocate of the established code, and opposed to all innovations or attempted changes for the purpose of increasing patronage. Now, from the reply to the query of J. P. W., and your comments, I find that so long as a physician is under a contract to do ordinary medical practice for a corporation, just so long he is debarred the privileges of a member of the American Medical Association.

Now, in self defense allow some plea for the system.

I am one of the barred class. I am engaged by a corporation to attend all or any employe who may be injured or fall sick while engaged by the company.

Now, the terms of my contract extend to all persons acting in any capacity for said corporation, at a fixed salary, depending on number of employes. There is a large percentage of the laborers who are opposed to paying anything for medical or surgical attendance, and are very far removed from the pauper class, and these are the ones who have most sickness.

Now, the physician who shall attend these has no recourse whatever to obtain remuneration for his time or labor, except as he is remunerated by the corporation employing them. Their time and labor is valuable to the employer, and for this reason a regular physician is employed to care for them, and a reasonable remuneration is paid him, very far in excess of what could be obtained from the small minority who recognize the value and duly appreciate the services of a medical man.

Furthermore, it secures to the afflicted prompt and early attendance, which in many instances prevents long and tedious illness, with its loss of time to the sufferer and strain on the physician.

Ours is also a mixed population. The refined, intelligent, educated, ignorant and demoralized all gathered into one community. Such being the case, there must be some plan followed that will reach all these varying classes, and at the same time not work any hardship to physician or patient. Now, the corporation steps in and requires so much per capita to be set aside for the purpose of remunerating a medical attendant.

This in an old and well established community would be all wrong, and the physician who would resort to such a course for collecting dues would be in the highest degree reprehensible; but with a floating population, with no ties or hindrances, it would be equally as bad for a medical man to be beaten and defrauded of what was duly earned, when it could only be secured by attending all cases under a direct contract with employers.

Whatever relation my present situation may sus-

tain to the code, I am still an advocate of it in full, as the very fact that it cannot be warped to fit every case is the strongest proof of its excellence.

Though the fact of erring in one particular makes the offender err in all, still I must justify myself by the preceding considerations. The *law* is just; the *man* is guilty.

There are probably *many* readers (and I hope there are) of your valuable journal as culpable as I, who may feel as I do about this subject.

This plea, though a poor one, you can use as you see fit.

Hoping for the welfare and permanence of the JOURNAL,

I am yours truly,

J. W. RUSSEY, M.D.

LAINSBURG, MICH., October 1.

TO THE EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,

DEAR DOCTOR: It always gives me pleasure to write to a man or body of men, who can appreciate an idea without a surgical operation.

The matter about which I only wish to say a word has been broached many a time, and is now agitating the minds of the profession in various parts of our land, viz,:

First—How much do we owe the alleged "manufacturing chemist?"

Second—How much does he owe us?

It furthermore has occurred to many of us, Dear Doctor, that the time when this clay can talk to the potter should pass. For a long series of years it has been the practice of the chemical clay (keeping up the simile) to tell the professional potter how it should be used. How it would act if it was not used as requested, and how the whole business would practically go to ruthless ruin unless the Esculapian demijon was molded to meet its wants.

Again: How are we to distinguish among these various alleged manufacturing chemists? Not one of these gigantic advertising medical swindles but what style themselves "chemists." "Well," these men will reply, "the profession know for we have the indorsement of some of their best men." Exactly, And there is where the laugh comes in.

Here are a class of men depending almost entirely upon the profession for support, who travel just as close to the dividing line between true and false medicine as they can and escape detection. Only the other day I received a letter from an Eastern institution of this sort saying that they had sent me a sample bottle of Phosford's Acid Horsephates or something of the kind (recommended by physicians), and enclosing a postal card for a reply. The reply went in short meter, and to this effect: "All I know about it is that like any ordinary well advertised nostrum, I had to take a dose of it every time I picked up my morning paper, and even in my Sunday reading it came recommended by a clergyman, and that I had had enough of it to do me 2,700 years." Now, my Dear Doctor, I ask you and through you the various members of the American Medical Association, is it right or proper that we of the profession, who have to work for a living, should be pestered and bothered in our work in that way?

There is another class of "manufacturing chemists" who do not insinuate their advertisement under everybody's nostrils, but who prey upon the profession with pseudo remedies. They give a formula right along with the bottle. Oh yes, but it is like the "prescription free" which used to come from the physician down in New Jersey, whose "sands of life were nearly run out"—they are the only ones who can prepare it—and their profit is like unto the Dutchman's one per cent.

Isn't it getting to be about time that the profession began to sit down on these open advertisers and secret venders? I guess yes. And when they do these people will think a mule has kicked them, for it always kicks a man twice before he gets out of reach.

E. B. WARD.

MEDICAL LORE OF THE AMERICAN INDIANS.

MR. EDITOR:—A former number of this Journal contained a very interesting article from Dr. F. Andros, of Mitchell, Dakota, on the Medical and Surgical Lore of the Winnebago and Sioux Indians. In the following paper he continues the subject, with the addition of some points of Indian mythology, connected with their medical theories.

One of his observations as to what were the theological ideas of the Winnebagoes before they were much modified by the ideas of the whites, will interest ethnological scientists. The latter have of late been discussing the question whether the Great Spirit, called by the Chippawas Sha Monedo, was an original idea of the natives, or a modern notion introduced by the missionaries. Dr. Andros was a member of the sacred lodge at an early time, when it would probably not be difficult to distinguish new imported ideas from aboriginal ones.

His impression is that the idea is aboriginal. He says that besides the numerous lesser spirits, they recognized one specially Great Spirit, who was the general author of all good. As this spirit was always disposed to do all the good possible, they did not deem it necessary to pay much attention to him, but they had another spirit, who, if not as great as the other, was at least considered very powerful, viz: the Bad Spirit,—a special author of evil, whom it was necessary to pacify by various services. Their system therefore would seem to partake of a little of the dualism of Zoroaster and the Parsees.

In this connection it may be worth while to state that there are in this city original manuscripts written some fifty years ago by a Chippawa halfbreed, giving an account of the notions and customs of the northern Chippawas, beyond Lake Superior, whom in his time, he stated to be mostly unaffected by the ideas of the whites. He confirms the idea of Dr.

Andros so far as to state that petitions and thanks for success in hunting were regularly offered to the Great Spirit by the chief of Chippawa bands, and that on killing an animal the hunter made special apologies to the special spirits of the animal killed, who might, as they feared, be disposed to revenge their deaths.

These facts derive their scientific interest partly from the recent dispute of scientific men on the aboriginality of the idea of the Great Spirit, and from the fact that the spirit lore of the Indians is the basis of a noble school of their medical art.

E. ANDREWS, M.D.

MITCHELL, D. T,, August 6, 1883.

DEAR DOCTOR: I have been so busy, professionally, that I have neglected an early reply to your two last letters.

I think the Winnebagos and Chippewas have no knowledge of their origin. They have a tradition, but it is so merged with superstition that it is wholly improbable. They are all F. F. Vs., and spring from a great and powerful stock. In one thing they agree, that their early home was on the great lakes far to the East, or as they express it "from the rising sun." In a recent conversation with an old trader at Fort Hale, he says the Dacotas have some notion that they came from "the rising sun." I am inclined to the belief that the eastern portion of our continent was first settled, and like the whites they have been pushed west either by stronger or more warlike tribes or that they have been the aggressive party.

One thing which would go to corroborate this theory is the immense amount of game which formerly occupied this country. As early as 1843 when I visited this country for the first time, one hundred miles or less from the Mississippi river the buffalo range was struck and the man who has not seen it would be incredulous if told the amount of buffalo then feeding on the plains of Iowa and Dakota. They were almost numberless. Buffalo as far as the vision could reach. Now 500 miles west very few are seen. They left east of the Missouri in 1873, since which time only an occasional one has been seen, and this was long before the whites occupied the country.

A few words regarding their medical practice. They have two schools of medicine. The one use baths, bleeding and medicinal herbs. The other resort to the marvelous. The latter are seldom called until the medicine man has exhausted his store of knowledge and the patience of the patient. Then comes the Great Wabeno. A lodge is prepared with great pomp and parade. Every stick used in its construction is of different variety of timber. This frame work is covered with skins or bark. The patient is placed within. Then comes the Great Wabeno fantastically dressed, with drum and rattle, accompanied with an improvised song, the burden of which is a request to the spirit of disease to vacate the premises. This is accompanied with the laying on of hands and sucking the flesh of the patient in different parts. The effect produced is the same I have seen in animal magnetism among the whites. The singing is really ventriloquism, the sound seeming to come from above and not from the lips of the performer. If the medicine man is successful and the patient recovers it adds to the reputation of the magician, and as among the doctors of the present age, he wrests from the *vis medicatrix naturæ* the credit of the cure. If the patient dies its all right, they are satisfied that the disease was incurable, and they have only to scare away the Bad Spirit who is hovering around to seize the soul ready to depart. This is accomplished by the most infernal din, firing of guns, beating drums and howling, in which all join.

Should the patient die in the family lodge, it is invariably burned, and a new one erected. When death is anticipated the patient is removed to a small lodge constructed for the purpose. So, also, a squaw in confinement is left alone in a small lodge; also during the menstrual period the woman is separated from the family, and is not allowed to use any of the vessels for culinary purposes used by the family until after purification by water, to which they resort immediately after the flow ceases.

From observation and what I could learn from the very aged Indians, syphilis is a modern disease. Among the very aged Indians or squaws there are no indications of ever having suffered from it. The younger Indians show the sequellæ of the disease in all its Protean forms.

At a treaty held with the Winnebagos at Turkey River, Iowa, in 1845, Old Gull, a very aged chief, made a very feeling speech, bemoaning the condition of his tribe, in which he said: "When I was a boy adultery was rarely known among the women, but now the Winnebagos are a nation of whores, and that place" [pointing to the Mission school-house] "is the place where they were made." And from my own observation I think the old chief was right in his assertion.

Owing to the filthy habits of the Indians syphilis is a much more loathsome disease than among the whites. For it they have no remedy. Gonorrhœa, for the same cause, is a serious disease among them, and very common. For this they have a remedy, obtained from the different varieties of pine. They peel the bark and scrape off the juice between the bark and wood, which I think is quite as efficient a remedy as the balsam copaiva. They also use the buds of the balsam of Gilead, an infusion.

I expect shortly to visit Forts Hale and Randall, on the Sioux reservation, and will get what information I can from the old employes as regards these points, and if I obtain anything worthy of remark will write you again.

Respectfully,

F. ANDROS.

FOREIGN CORRESPONDENCE.

LONDON, Sept., 1883.

Among the numerous changes that have taken place during the past year in the various staffs of our medical schools, Dr. Blaxton Hicks has retired from the office of obstetric physician at Guy's and been appointed a consulting medical officer. Mr. Johnathan Hutchinson has become one of the consultants at the London hospital, but will continue to give clinical instruction at intervals. Dr. Burdon Sanderson leaves University College for Oxford, where he takes office as Waynflete Professor of Human Physiology and Histology. In the University of Cambridge Dr. Michael Foster takes the newly created professorship of Physiology and Dr. Humphrey that of Surgery. Dr. Southey resigns his office of Physician at St. Bartholomew's in favor of his new appointment as a Commissioner in Lunacy.

A new evil is becoming known to the profession here, taking the name of "Lawn Tennis Elbow" from its being acquired during the pursuit of that popular game. Dr. Henry Morris says it is due to sprain of the pronator radii teres muscle and the fascia and inter muscular septum on the inner side of the humerus, from which its greater head arises, by the rapid and forcible pronation of the forearm which constantly takes place in lawn tennis. The treatment necessarily is rest and support of the affected joint.

Those members of the Meteorological Society of Scotland and the Edinburgh Royal Society with Mr. Murray, of "Challenger" fame, will deserve the thanks of the scientific world if they succeed in establishing the "Edinburgh Marine Station for Scientific Research." They propose to acquire some disued quarries at Granton, fill them with water from the Firth of Forth and maintain an extensive and varied series of biological investigations. They will also institute a very complete series of observations on the temperature of the surface water, and of the bottom and intermediate waters at fixed points of the Firth, and at stated intervals throughout the the year. The station will be provided with a steam pinnace, fitted for dredging purposes and the making of hydrographic observations. The committee entrusted with its organization are quite confident, it appears, of their efforts being attended with success.

It is suggested that the Collective Investigation Committee should, in view of the increase of cancer, allow it to form one of their subjects of inquiry.

The authorities have at length abolished the old "military seat" in the cavalry. In future the men will be allowed to rise in their stirrups in trotting. No doubt there will be found a great decrease in the number of invalids due to hernia and affections of the veins.

A coronor's inquest has been held upon Marwood the public executioner. as reports were current that his death had been brought about by the Irish "Invincibles," and that poison had been administered through the agency of the medical attendants. The evidence showed that the lungs presented symptoms of pneumonia, in conjunction with disease of the liver and kidneys, the stomach having the appearance of that of a man who had been addicted to drink. In a pathological point of view there was little or nothing of importance. The medical men received an expression of sympathy from the coronor and jury for any annoyance that might have been caused them, but the reports having found their way into the public press and had become of public interest, and an inquiry was due for their own sakes and the profession at large.

The jury on the inquest on the body of one of those killed in the late fatal fire at the Southall Park Asylum have appended to their verdict a rider "that the laws which give power to confine lunatics should provide efficient means for their protection from fire." It is to be sincerely hoped that this expression of opinion will be the means of every possible contrivance being taken to avert any recurrence of such an appalling catastrophe.

At the last meeting of the Cambridge Medical Society an interesting case of unusual rapidity of the heart's action was related as occuring in a lady aged 34, married. The attacks came on suddenly after fatigue or exhaustion, with pain over the prœcordia and palpitation. During the attack the pulse could not be couuted at the wrist, and the number of the heart's beats counted with the stethoscope, was about 196 per minute. The paroxysm usually terminated suddenly, the pulse going down to about 76; vomiting occasionally took place afterwards. The attack would sometimes last not more than twenty-four hours. At first the treatment was digitalis. This was ineffectual. Bromide of potasium and valerian were useless. Hypodermic injection of morphia, a sixth of a grain, night and morning was then tried. The patient slept part of a night and the palpitation ceased about five in the morning. It was regarded as a case illustrating the gastronic system passing beyond the control of the cerebro-spinal.

Sir Edwin Saunders, the newly knighted dentist to the Royal family, has given some property adjacent to the London Dental Hospital to that institution, so that it may be enlarged.

BOOK REVIEWS.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, VOL. VI., 1883.

Most of the papers in this volume have appeared in print, either in full or in abstract, elsewhere. They are therefore already familiar to many. Their chief characteristic is their excellence. In the limits of this brief notice we can merely enumerate the papers that are collected in this volume, and call especial attention to one or two, not because so much better than the others, but because they have attracted our own attention more particularly.

The first article is a "Report of the Committee on Meteorology and Epidemics for the Year 1880," by R. A. Cleeman. Then follows "A Case of Fungosities of the Bladder, Cured by Scraping with the Finger, With Some References to the Literature of the Subject," by W. F. Atlee. "Two Cases of

Congenital Irideremia, with Lamellar Cataract in One and Dislocated Cataractous Lenses in the Other, by Geo. C. Harlan. "Report of a Case of Malaria in a Child, aged 20 months, in which Morbid Enlargement of the Liver and Spleen Occurred; also a Case of Aortic Stenosis and Regurgitation, with Atheromatous Aorta, in a Woman aged 103," by John M. Keating. "Observations on Catarrhal Fever," by J. M. DeCosta. "Cases of Poisoning from Drinking Impure Water," by J. H. Hutchinson. "Remarkable Case of Sacculated or of Circoid Aneurism of the Second Interosseus Branch of the Deep Palmar Arch Treated by Excision," by John B. Roberts. "Report of Three Cases of Abscess of Brain," by J. T. Eskridge. "Tenosynovitis: Its Cause, Nature, Symptoms, and Treatment, Based upon an Analysis of Fifteen Cases, by W. B. Hopkins. "The Presence of Micrococi in the Blood of Malignant Measles; Its Importance in Treatment," by J. M. Keating. This paper gives the history of microscopic examinations of the blood of cases of measles that occurred during an epidemic in the Children's Asylum of the Philadelphia Hospital. Micrococci are to be found in blood taken from the measles papsule in ordinary or mild cases. But is not present in the general circulation or in the blood taken from the end of the finger. In his microscopical examination Dr. Keating was assisted by Dr. Formad. "The microscopic examination of the blood showed the constant association of micrococci with the general manifestations of malignancy (a condition already well known), and the gradual but positive amelioration of all bad symptoms by treatment which was directed to the micrococci, as the fons et origo of trouble was evident (this I believe for the first time exhibited.)" "The moment that symptoms of malignancy—viz., dark eruptions, ill-defined crescents, delayed and imperfect appearance of the eruption, with feeble circulation, high temperature, and pharyngeal false membrane appear, the examination of the blood showed micrococci in abundance in the field. We find that they develop with activity when the blood-current is retarded; hence we find them spread throughout the heart-clot itself, possibly at times having been here arrested by the obstruction of the flow caused by the heavy congestion, known as a frequent complication of these cases, and finally aiding by a mechanical cause alone. the deposition of fibrine that forms the clot. They act upon the white blood-corpusles, destroy it in all probability, or, at least, as one of the cases proves conclusively, prevent its change to red corpusles, and thus the oxygen carriers being either destroyed or reduced in numbers with none to replace them, the tissues retain their detritus for want of carriers to relieve them and another factor is added to increase mortality. I asked Dr. Formad what, in his experience, most readily checked the development of micrococci in his culture solutions, obtained from erysipelas, diphtheria, etc.; he answered, alcohol. Carbonate of ammonia and digitalis were at once withdrawn from the treatment for the future, and whisky substituted. Five children had already died, and the sixth presented in the symptoms that experience had shown indicated commencing heart-clot. Three ounces of whisky were given in the next twelve hours in frequent small doses. No micrococci had penetrated into the corpuscles in this case. It recovered.

The next article describes "A case of Cervical Lymphadenoma, treated by the application of earth." By A. Hewson. "The Bacillus Tuberculosis" by James T. Whittaker. This is an excellent lecture, in which the history of the discovery of bacillus tuberculosis is given; also its characteristics and a very clear explanation of the methods of displaying it. The next paper is one of much interest on "Clinical Observations on Albuminuria, based upon a Study of Sixty-two Cases seen in Private Practice," by A. V. Meigs. "Autopsy of a Case of Transposition of the Viscera," by H. A. Wilson. "Flexible Gelatin as a Substance of Adhesive Plaster," by A. Hewson. "Report upon a Specimen of Xanthic Oxide Calculus," by W. W. Keen. "A Resume of twenty-five Cases of Abdominal Section," by J. E. Mears. "Heart-Puncture and Heart-Suture as Therapeutic Procedures," by J. B. Roberts. "Observations on the Management of Eateric Fever, according to a Plan Based upon the So-Called Specific Treatment," by J. C. Wilson. "Arsenical Paralysis," by C. K. Mills. "A Partial Study of the Poison of Heloderma Suspectum," by S. W. Mitchell and E. T. Reichert. "The History of a Case of Abdominal Cystic Tumor, where Seven Years after Removal of the Tumor by Laparotomy a Second Operation was Demanded: Tapping through the Vagina resorted to, with Consequent Death of the Patient," by W. F. Atlee. "Sewer Gas and its alleged Causation of Typhoid Fever," by Geo. Hamilton. In this Dr. Hamilton opposes the prevalent theory of the causation of this fever by sewer gas. The article is of considerable interest, especially to those who have been paying particular attention to this subject. Next follows an elaborate article on "Tubercular Cerebro-spinal Meningitis," by J. T. Eskridge. "Does Excision of the Larynx Tend to the Prolongation of Life?" by J. Solis Cohen. "Report of a Case of Resection of the Radius, performed by J. A. Barton in 1828," by W. B. Hopkins. "Infant Foods," by A. R. Leeds. "The Relation of Pain to Weather," Studied during Eleven Years in a Case of Traumautic Neuralgia by C. R. Catlin, with notes by S. W. Mitchell. "A Clinical Study of the Cranial Nerves," by H. Allen. The next two and last papers have already been given in abstract in this journal. They are on "Some Observations on the Salivary Digestion of Starch by Infants," by J. M. Keating; and "A Note on the Fœces of Starch-Fed Infants," by N. A. Randolph.

The volume contains in addition to these valuable articles the remarks that were made by members of the college when they were read.

NECROLOGY.

Mussey, William Heberden, M.D., of Cincinnati, Ohio, was born in Hanover, N. H., Sept. 30, 1818, and died of apoplexy, at Cincinnati, Ohio, Aug. 1, 1883. Overwork was supposed to be the cause. During the hot weather he was pushed with professional business beyond endurance; as his partner was absent taking his summer vacation, Dr Mussey was left alone to do all his work. On the last day of July he was conversing with a patient at his office. He complained of being very tired, and in a moment more he said his head troubled him. He sent for water, and attempted to go to an easy chair, but could not, and asked to bé layed on the floor. With this he became insensible, and physicians were sent for in all directions, and soon arrived. Word was sent to his family, and an ambulance summoned from the hospital. About 6 P. M. he was removed to his residence at Mt. Auburn, two miles or more from his office, where, unconscious, the next day he died, literally "in the harness." William H. Mussey's parentage was honorable and honored. His father. Prof. Reuben D. Mussey, was of French extraction, and hs mother of English. Her maiden name was Hitty Osgood, a lady cultured, kind, gentle and beloved by all. Quite a number of Dr. Mussey's paternal ancestors had made the study and practice of medicine their pursuit. The father, Dr. R. D. Mussey, was eminent as a surgeon in New England, and afterward at Cincinnati, holding the Chair of Surgery at both places. He was not only distinguished as a teacher and skillful practitioner of conservative surgery, but as a profound thinker and benevolent Christian gentleman.

Wm. H. Mussey, in boyhood, as his old fellow-student, Mr. H. C. Lord, writes, "was a close and diligent student, always kind and indulgent to his playmates, and looked up to by them, as boys always respect an elder one who respects himself and influences them by his own example. He was a religious and devotional boy. Although at times impatient and irascible under opposition, he was quick to forgive and always as quickly forgiven."

Dr. Mussey's literary and classical education was received in New England academies. After removal, with his father, to Cincinnati, for a short period he was engaged in mercantile pursuits, which did not suit his taste. Away flew his yard-sticks and books of account; inheriting from his great father an inborn love of the practice of medicine and surgery, he entered his office, a student and a devotee. He was again at home, in the noblest sense of the word. Into that office he brought with him the ambition of youth—a natural aptitude, the tenderness of his mother as well as the will and concealed wit and humor of his grave and apparently stern father.

Dr. Mussey pursued his regular professional studies with his distinguished father, and the usual curriculum of the Ohio Medical College, where he graduated in 1848. After this he spent one or two years in Paris, observing the treatment and operations of the most eminent physicians and surgeons in France. On returning to Cincinnati he was associated with his father, making surgery a special part of his professional career. In this department be made an enviable and well-earned success, both as teacher and practitioner. In 1865 he was chosen Professor of Surgery in the Miami Medical College, and with honor and general satisfaction he continued in that position until his demise. He always applied himself to the study and practice of surgery since he embarked in his profession. He was a conscientious, careful, scientific and successful surgeon. In whatever situation he was placed he was ready for the emergency. Although in general following the old, well-tried paths of illustrious predecessors, he at times with keen perception and inventive genius marked out for himself a new departure from the common routine practice. Dr. William H. Mussey was a member of the City and State Medical Societies, in which he took an active part. The writer has observed him, in the committee room, as elsewhere, display a marked executive ability. He was a member of the American Medical Society of Paris, and of the American Medical Association, of which he was one of the vice-presidents in 1864. He received the honorary degree of Master of Arts from Dartmouth College, N. H., after he had become distinguished in his profession. Dr. Mussey was associated with his father in practice at Cincinnati until the latter retired from business. On the war of the rebellion, when on the arrival of the intelligence of the firing on Sumpter, he immediately sought and obtained permission from Secretary Chase to establish a volunteer army hospital in Cincinnati. This he accomplished by occupying and furnishing the Marine Hospital on Lock street. He raised the necessary funds by private contributions, organized the hospital under the necessary boards of management, brought it into effective working condition, and at the end of three months turned over to the United States Government the first, and one of the best volunteer hospitals the country possessed during the entire war.

He was subsequently called upon by the parent organization to establish the Cincinnati branch of the United States Sanitary Commission, which he did most successfully. He then offered his services as surgeon to the Government gratis, as long as the war should last. His offer being refused, he repaired to Washington, was examined and commissioned as Brigade Surgeon, with the promise that he should assume the charge of the hospital he had founded in Cincinnati.

After visiting home he was ordered to the front as Medical Director of a Division in Gen. Buel's army. He joined the forces in the field and served in the battles of Pittsburgh Landing and Corinth. He was then promoted to Medical Inspector with the rank of Lieutenant Colonel in the United States Army. After serving at the second battle of Bull Run and the battles of Antietam and Fredericksburg, he made a tour of inspection, during which he inspected every regiment from Washington to Florida. In the various military duties assigned to him he was considered one of the most efficient medical officers in the service.

Dr. Mussey won and retained the respect of a large number of physicians and surgeons, and in him the

general public placed implicit trust, knowing that he was truthful, deliberate and conscientious. He was Surgeon of the Cincinnati Hospital, St. John's Hotel for Invalids, St. Luke's Hospital and President of the Cincinnati Society of Natural History. In all these positions he gave universal satisfaction. Although much of his valuable experience is unrecorded, yet he contributed a few papers to medical societies and periodicals which manifested the vigor of a fertile, cultured brain.

Dr. Mussey took a lively interest in the collateral sciences and general literature. He was a member of the Board of Education, and at one time donated to the public library of the city more than five thousand volumes as a necleus of the "Mussey Medical and Scientific Library," a memorial of his distinguished father. He took great delight in conversation, debate or lectures to allude to the practice and precepts of his father. His benevolence and charities were commensurate with his abilities. He was essentially unselfish—he lived for others. He was an elder in the Presbyterian church for many years; trusting in the merits of his Saviour he died in charity with all.

In 1857, Dr. Wm. H. Mussey was married to Miss Caroline W. Lindsly, of Washington, D. C. She still survives. They had two children—a daughter who died in early infancy, and a son, Wm. Lindsly Mussey, who is still living and studying medicine. His doméstic relations of a quarter of a century were pleasant and agreeable. The mortal remains of this eminent, intelligent and good man were deposited in Spring Grove cemetery in the presence of dear, weeping relations and numerous friends.

JOHN W. RUSSELL, M.D., OF OHIO.

PELTON, LOUIS F., M.D., of Mount Kisco, Westchester county, New York, was a native of Bradford, in the same county; died at his residence, Sept. 17, 1883. He was in active practice for over 25 years. For many years Dr. Pelton was President of the Board of Education of Mount Kisco, and held other offices within the gift of his neighbors. He was one of the active spirits in organizing and conducting the Bradford Farmers' Club. He was also a member of the Westchester County Historical Society, and a member and at the time of his death one of the censors of the Westchester County Medical Society; a member of the American Medical Association since 1864. During the war, Dr. Pelton was one of the examining surgeons under the Provost-Marshal of the district. He had also been coroner, and a member of the Board of Supervisors for Westchester county. He leaves a widow, one son and one daughter.

J. M. T.

MIXER, SYLVESTER FREDRICH, M.D., of Buffalo, New York, was born at Morrisville, Madison county, N. Y., Dec. 27, 1815; died at his residence in Buffalo, Sept. 17, 1883. He is descended from English settlers in New England. Having prepared himself for a study of medicine, he attended lectures and graduated in medicine at Yale College in 1841, and the same year settled to practice in Buffalo. After practicing for six years, he went to New York, and attended a course of lectures at the College of Physicians and Surgeons, and in 1847 received the degree of M.D. He was studious and observing, and acquired skill and reputation in his profession. He was an active member of the Buffalo and also of the Erie county Medical Societies; and a member of the American Medical Association since 1850. From 1858 to 1874 Dr. Mixer was attending physician to the Buffalo City Hospital. On retiring from the position of regular attending physician, he was elected on the counselling board, which position he held at the time of his death. In 1858, Dr. Mixer was married to a daughter of Dr. Perrin Knowlton, of Cincinnati, Ohio, who survives him.

J. M. T.

LEAL, JOHN ROSE, M.D., was born at Meredith, Delaware Co., N. Y., on the 20th day of October, 1825; died of peritonitis at his residence in Paterson, N. J., August 28, 1882. His father, John Leal, and mother Martha McLaury, were both descended from first settlers in that county. His great-grandfather, Alex. Leal, being born in Scotland in 1740, sailed from there on August 12, 1773, and landed in New York on April 13, 1774; and immediately located in Delaware Co. The doctor received his preliminary education at the Literary Institute, Franklyn, Delaware Co., and at the Delaware Academy at Delhi. He read medicine under the direction of Dr. Almiran Fitch, of Delhi, who was reputed to be one of the first physicians and surgeons of Delaware Co., and graduated at the Berkshire Medical College, Pittsfield, Mass., in the year 1848, afterward supplementing the store of knowledge by a post-graduate course at his College of Physicians and Surgeons, New York City. He located at Andes, Delaware Co., where he married a daughter of Rev. James Laing, in 1856. He continued in this locality, with satisfaction to his patrons and credit to himself, until the year 1862, when he was appointed surgeon of the 144th Regiment, N. Y. Volunteers. He received several promotions, being made brigade, division, and corps surgeon in turn, and at one time he was medical director in the department of the south. After the war, he recommenced the practice of his profession at Purdy, Westchester Co., N. Y., but finding that the practice, which necessitated a great deal of riding, was taxing him too severely, on account of his health not being good, the result of injuries and diseases incurred during his army life, he removed to Paterson, N. J., in 1867, at which time the writer of this sketch became acquainted with him, and remained intimate with him till the time of his death, which resulted from an attack of peritonitis of an asthenic character, sequel to an attack of dysentery, which at the onset did not indicate an unusual degree of severity, but was undoubtedly aggravated by the chronic diarrhœa from which he had been a sufferer more or less constantly since his retirement from the army. The doctor remarked to me, when I said that I hoped soon to see him about, that there was an old trouble there. The doctor was of a genial and cheerful disposition, always ready to respond to the call of

suffering humanity, though suffering himself. The doctor was a man of strict integrity, always as regardful of the rights of his professional brethren as of his own. He was universally respected by his colleagues, and commanded the confidence of his patients, to whom he was always a faithful servitor, exercising judgment and skill in the management of those coming under his charge.

The doctor united with the Presbyterian church in Andes under the ministration of Rev. Duncan C. Niven, and on his removal to Paterson joined the First Presbyterian Church, with which he remained connected up to the time of his death. He leaves a widow and two sons to mourn the loss of a Christian husband and father. C. S. VAN R.

Furnished by B. A. Watson, M.D.

TUCKER, GEORGE GREENVILLE, M.D., of Westfield, Mass., was born at Warren in 1834; died suddenly of heart disease, and was found dead in his bed, Monday morning, August 20, 1883. His medical degree was taken from Harvard University in 1855. He also passed two years in the Massachusetts General Hospital. After a year in private practice he went to London, Paris and Vienna, where he continued his studies. On his return to his home he settled to practice in Westfield, where he acquired a good business and reputation. In 1861 he was united in marriage with Miss Langdon, granddaughter of the late Abner Post. Doctor Tucker was a member of the Massachusetts Medical Society, and of the American Medical Association since 1865. His demise was unexpected, as he attended to his patients as usual the day before his death. He was widely known and much respected. J. M. T.

MOSHER, JACOB S., M.D., of Albany, N. Y. Was born in the town of Coymans, Albany county, N. Y., March 19, 1834, died suddenly of heart disease at his residence, August 15, 1883. He graduated A.M. from Rutgar's College in 1853. His medical degree was obtained after regular course at Albany Medical College in 1863. Early the next year he entered the military service as a volunteer surgeon, serving in the Army of the Potomac, which was then investing Petersburg and Richmond. He was fully occupied there and in the hospitals at Washington until the close of the war. While still in the service he was appointed Assistant State Medical Director for the State of New York, on duty at Washington, which detained him there until 1867. Returning to New York, he was appointed by Governor Hoffman Surgeon General of the State, which position he filled acceptably until the accession of Governor Dix. In 1870 he was appointed Deputy Health Officer of the port of New York, and served at quarantine until 1876. At the close of this six years of arduous duty he made a visit to Europe, visiting and studying society and hospital management in England and on the continent.

Returning home, he settled down to the earnest pursuit of private practice, the ambition of his life and for which he was by study and natural gifts eminently qualified to occupy a front rank. He was an active member of the State and County Medical Societies, and in 1872 was sent as a delegate to the American Medical Association. In 1863 he became a member of the Albany Academy, and was Professor of Chemistry and Medical Jurisprudence from 1864 to 1870 in the Albany Medical College. Prom 1865 to 1868 he was a member of the Board of Public Instruction, a position in which he did good service. He was also a member of the Albany Institute, and of the New York Academy of Medicine. Dr. Mosher was married December 20, 1863, to Emma S., daughter of the late Jesse Montgomery, Esq., of Albany, by whom he had four children. She died in 1879. Three children survive. The Doctor had been working close in full and responsible practice, and had arranged to leave for a few weeks' recreation on the following day. Death overtook him in the prime of life and in the midst of his usefulness. He retired to bed after 12 o'clock, and was found dead in his bed in the morning, as in a peaceful sleep.

PIERSON, WILLIAM, Sr., M.D.; born in Newark, N. J., December 4, 1796; died October 1, 1882. He graduated at Princeton College in 1816, the highest honors being equally divided between himself and his brother, the late Rev. Albert Pierson.

Dr. Pierson married Margaret Riker, daughter of the late Dr. Hillyer; she died in 1853. Six children were born of this marriage, of whom three survive. Dr. Pierson was descended from one of the early settlers of Newark. Four generations of his ancestors had practiced medicine in the vicinity. He attended medical lectures at the University of Pennsylvania, and was licensed to practice medicine by the Medical Society of New Jersey in 1820. He then entered upon his professional work, being associated with his father until the death of the latter in 1833. He was secretary of the State Medical Society for thirty years, and upon resigning in 1866 was elected Third Vice President, and in 1869 President. He was a successful practitioner, as well as beloved and esteemed for his virtues as a man, by all with whom he came in contact. Outside of his profession he held many civil offices, never courting them, yét never hesitating to serve in any capacity in which the people saw fit to place him. He was a member of the State Legislature in 1837-38; Director of the Board of Freeholders and Sheriff of Essex Co. in 1849-51; first Mayor of Orange, serving three consecutive years, 1860-63, and member of the Common Council for the three following years. He was active in every improvement for the advancement of the city's interest, and also interested himself in several benevolent and industrial institutions.

Resolutions by the Essex District Medical Society:

Resolved, That we tender our cordial spmpathies to the family of our deceased brother in their affliction, and that we will attend his funeral as a society.

Resolved, That this minute and these resolutions be published in the papers, and be communicated to the family of the deceased by the Secretary.

Furnished by B. A. Watson, M.D., of New York.

SCHENCK, JOHN V., A.M., M.D., was born in Middlesex county, near Brunswick, N. J., in 1825, and died at Atlantic City, N. J., July 25, 1882. His family was one of the oldest in the State. He graduated at Rutger's College in 1845. He received the degree of M.D. from the Medical Department of the University of Pennsylvania in 1849. After practicing a short time in his native county, he located in the city of Camden, where he continued during the remainder of his professional career. He was noted for his learning, courtesy, soundness of judgment and kindness of heart. He was a member of the City, County and State medical societies, and was president of the latter in 1876, and of the Americal Medical Association in 1858. A. M.

Furnished by B. A. Watson, M.D.

MISCELLANEOUS.

AMERICAN MEDICAL DIPLOMAS ABROAD.—Australia seems to be peculiarly favored just now with bogus diplomas from the United States. The *Australian Medical Journal*, of June 15, tells us that the Medical Board of Victoria has recently refused to register a Rev. R. V. Danne, who presented a diploma from the Medico-Chirurgical College of Philadelphia, which Mr. Danne said had only been in existence two years or thereabouts. A translation of the diploma is given, as made by one of the best classical scholars in the colony, which is interesting reading. Among other things, it declares the holder to have passed all his examinations in jovial fashion (in more jucundo). The translator expresses his appreciation of it by saying: "It is hideously bad Latin, and there are grammatical blunders in it for which a little school-boy would be soundly whipped."

AMERICAN ACADEMY OF MEDICINE.

PHILADELPHIA, September 26, 1883.—DEAR SIR: The American Academy of Medicine will meet at the New York Academy of Medicine, on Tuesday, October 9 (three o'clock), and Wednesday, October 10. The address by Dr. H. O. Marcy, of Boston, Mass., President, will be delivered on Tuesday evening, October 9, at eight o'clock, on "The Recent Advances of Sanitary Science; the Relations of Micro-Organisms to Disease" (illustrated by microphotographs projected upon the screen).

The following papers have been promised for the general meetings:

Dr. L. S. Pilcher, of Brooklyn, N. Y., on "The Relations of Medical Journalism to Higher Medical Education in America."

Dr. Traill Green, of Easton, Pa., on "The Imperfection of Technical Studies as a Means of Mental Culture."

Dr. Benjamin Lee, of Philadelphia, on "The Value of an Acquaintance with Botany as a Preliminary to the Study of Medicine."

Dr. Charles McIntire, of Easton, Pa., "Is it Fair? The Study of the Comparative Political Position of the Medical Profession in the United States."

Dr. A. D. Rockwell, of New York, on "The Exact Value of the Electrolytic Method."

Dr. J. Cheston Morris, of Philadelphia, "The Milk Supply in Large Cities."

Dr. Charles E. Cadwalader, of Philadelphia, "Considerations Upon the Public Provisions for the Care of the Indigent Insane."

Dr. A. D. Rockwell, of New York, "The late Dr. George M. Beard; a Sketch."

Report of the Committee on Laws of Medical Practice in the United States and Canada (Drs. Dunglison and Marcy).

Yours respectfully,

RICHARD J. DUNGLISON, M.D.,
Secretary.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM SEPTEMBER 21, 1883, TO SEPTEMBER 28, 1883:

DeLoffre, A. A., Captain and Assistant Surgeon; assigned to duty at Fort Niagara, N. Y. (par. 5, S. O., 182, Department of the East, September 27, 1883).

Havard, Valery, Captain and Assistant Surgeon; assigned to temporary duty at post of San Antonio, Texas (par. X., S. O., 120, Department of Texas, September 21, 1883).

Reed, Walter, Captain and Assistant Surgeon; relieved from duty at Fort Omaha, Neb., and assigned to duty as Post Surgeon, Fort Sidney, Neb. (par. 5, 3, O., 103, Department of the Platte, September 22, 1883).

Shannon, W. C., Captain and Assistant Surgeon; assigned to duty at Fort Bridger, Wyoming (par. III., S. O., 102, Department of the Platte, September 19, 1883).

Appel, A. H., First Lieutenant and Assistant Surgeon; assigned to temporary duty at Fort Warren, Mass. (par. 3, S. O., 181, Department of the East, September 25, 1883).

Carter, W. F., First Lieutenant and Assistant Surgeon; assigned to temporary duty at Washington Barracks, D. C. (par. 5, S. O., 182, Department of the East, September 27, 1883).

Richard, Charles, First Lieutenant and Assistant Surgeon; relieved from further duty at Creedmoor, New York, to return to his proper station, Fort Adams, R. I. (par. 1, S. O., 180, Department of the East, September 24, 1883).

Richard, Charles, First Lieutenant and Assistant Surgeon; granted leave of absence for two months, with permission to apply for extension of two months (par. 1, S. O. 49, Military Division of the Atlantic, September 25, 1883).

Wakeman, William J., First Lieutenant and Assistant Surgeon; relieved from temporary duty at Fort Sidney, Neb., to join his proper station at Fort D. A. Russell, Wyoming (par. 5, S. O. 103, Department of the Platte, September 22, 1883).

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

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ORIGINAL ARTICLES.

REPORT OF THE COMMITTEE ON PRACTICAL MEDICINE AND EPEIDMICS, OF THE ILLINOIS STATE MEDICAL SOCIETY FOR 1882-3.

BY N. S. DAVIS, CHAIRMAN OF THE COMMITTEE; READ AT THE MEETING IN PEORIA, MAY 15, 1883.

[From Advance Sheets of the Transactions of the Illinois State Medical Society.]

The By-laws of this Society make it the duty of the Standing Committee on Practical Medicine to report annually concerning such improvements as may have been made during the year in the management of individual diseases, and on the prevalence and special character of epidemics in all parts of this State.

Improvements in the management of any given disease may arise, either from a better knowledge of its causes, a more accurate understanding of its special pathology and tendencies, a more perfect comprehension of the action of remedies, and from direct clinical experience or observation at the bedside of the sick. By a full knowledge of the causes capable of producing a disease, the physician is often able to direct such remedies, or adopt such hygienic measures, as will neutralize or suspend their further operation, very much to the relief of his patient.

The more exact is our knowledge of the morbid processes constituting a disease, and of the tendency of those processes in developing the changes which we designate as the stages of the disease, and in secondarily disturbing other important functions, the more accurately and effectually can the physician select and apply his remedial agents for arresting or modifying those processes. In like manner, every addition to his knowledge of the action of remedies in the human system enables him to adjust their administration to the actual indications presented in the different stages of disease with more precision and effect.

And yet, when speaking of improvement in the treatment of diseases, we are quite prone to think of such items, only, as the discovery of some new remedy; some new and important application of an old one, or the development of some new methods in hygienic or other management.

It is obvious, however, that no adequate idea can be had of the real progress made in the management of disease, without taking the very comprehensive view just indicated. And in looking for evidences of improvement in the department of practical medicine during the preceding year (1882), I shall include the subjects of ætiology and special pathology, as well as that of the direct treatment of disease. During the past and several preceding years, investigations in the field of ætiology, or the causes of disease, have been pushed with great activity, partly on account of their bearing on the sanitary interests and regulations of communities and nations, and partly from the intrinsic scientific interest the subject creates in the minds of the investigators themselves. The active investigations in this field have been chiefly in two directions, namely—the use of the microscope in studying the blood, the structures, the secretions, deposits, growths, and all other morbid products, for the purpose of discovering any organic germs that may exist in them, and, if possible, of determining their causative relations to the diseases with which they are found associated; and a more extended and systematic study of meteorological and topographical conditions in their relations to the prevalence of diseases. Researehes in the first direction, with the highest magnifying powers, aided by all the devices that modern science can afford, and prosecuted by a large number of skillful investigators, have resulted in the discovery of some form of bacterial development in the blood and tissues of many acute general diseases, and in almost every form of morbid product thus far subjected to examination. With that tendency to hasten generalization, or the drawing of conclusions from too limited a number of established facts—characteristic of our profession—each new germ discovered has been regarded as *the cause* of whatever disease or morbid product it was found associated with, until "*germ theories*" of disease, and "germicide remedies," have come to occupy the most prominent place in the medical literature of the present time; and men, qualified for the task, could confer no greater benefit upon our profession, and, through it, upon the people of all classes, than to subject the whole field of what may be styled antiseptic surgery, germ ætiology, with germicide therapeutics, and antiseptic sanitation, to an impartial and rigidly logical investigation, by which really *established facts* should be separated from partial or incomplete observations; the true relations of cause and effect maintained, as distinguished from mere coincidences; and the special additional investigations required to supply the facts or data needed to render much that has aleady been done available for the deduction of conclusions of either scientific or practical value.

It is not within the province of your committee, however, to attempt such a task, but simply to call your attention to such developments in the department of ætiology, during the past year, as have a practical bearing on the treatment of disease. Perhaps the most important of these developments, and that which has occupied much of the attention of skilled microscopists, as well as the profession at large, during the past year, is that relating to the *bacillus tuberculosis*, first announced by Koch as the the special microphite, or germ, peculiar to tubercular disease. With much care and patient observation Koch demonstrated the existence of this particular bacillus, or germ, in the tubercular masses deposited in the lungs and in the sputa of phthisical patients; and then by cultivating or propagating the bacilli, and using them to inoculate small animals, found such inoculations to be followed by the development of tubercular disease in a large proportion of the inoculated animals. So far as relates to the existence of the bacilli in the tuberculous deposits and in the sputa of patients affected with pulmonary tuberculosis, the observations of Koch have been fully confirmed by other skilled observers, both in this country and in Europe. But the results obtained from attempts to propagate the germ, and demonstrate its causative or ætiological relations, have been so various and contradictory as to leave this part of the investigation incomplete. By some it is claimed that the bacilli of Koch have been found only in such pulmonary tubercles as were exposed to the inhaled atmosphere and in the sputa. But Dr. Belfield, of Chicago, claims to have found them in tubercular deposits from mesenteric glands; and Dr. H. Gradle, of the same city, in a paper to the Chicago Medical Society recently, claimed the ability to demonstrate their presence in all varieties of tubercle, so certainly as to constitute the most reliable means of establishing an early and reliable diagnosis. Such claims, however, cannot be received until they have been confirmed by a much greater number of accurate observations. The discovery of bacilli in the tubercular masses and sputa of tuburcular subjects has been construed as affording positive evidence that phthisis is an infectuous disease, directly dependent upon these organic germs as its efficient cause, and capable of being propagated from one individual to another through their agency.

The very important practical bearing of such inferences is apparent to all of you. If we assent to the inference that tubercular consumption is an infectuous disease, and that the specific infection, in the form of bacilli, exists in the sputa and breath of patients affected by it, the practical questions concerning the *isolation* of all such patients, and their treatment mainly by antiseptic and germicide remedies, at once assume an importance superior to all others. But the mere fact that the bacilli, or any other bacterial forms, are present in the substance of tubercle and in the sputa of tuberculous patients, justifies no such inference. Neither have the results of cultivation and inoculation with these germs been sufficiently uniform or successful to afford any corroborative evidence in favor of their infectious properties and ætiological importance. On the contrary the frequent failure of such experiments, and the close resemblance of Koch's bacillus tuberculosis to the bacillus cadaveris, found abundantly in the tissues of every cadaver left in a moderately warm atmosphere twenty-four hour after the death, renders it highly probable that both are mere accompaniments of certain deteriorative changes in organic matter, and possessing no causative relations whatever. This view is further sustained by two well-known and long-established clinical facts: First, that neither physicians nor nurses who daily examine and wait upon consumptive patients, either in the wards of hospitals or in private dwellings, afford any evidence of becoming infected, or of yielding any higher ratio of cases or deaths from the disease, than other classes in the community not so exposed to contact with the sick; second, that no disease in the long catalogue of human ailments affords stronger evidence of capacity for hereditary transmission than tuberculosis. There is, therefore, nothing in the present status of investigations on this subject that will either justify the isolation or quarantining of the victim of tuberculosis, the prompt disinfection of his sputa, or the expectation of curing him by the use of germicides.

These remarks apply equally well to nearly all the other diseases with which some variety of bacterial germ has been found associated. And yet a very large proportion of the ætiological, pathological and therapeutical novelties and claimed advancements found in the current medical literature, relate to the discovery of germs in some new relation or of some new application of the supposed germicide remedies. Even the very recent and popular *anti-pyretic* theories and remedies are rapidly giving place to so-called specific causes and remedies; and we are in danger of soon having a large proportion of acute diseases treated with as extravagant doses of the preparations of mercury, iodine, carbolic acid, and other active medicinal agents, under the idea of their germicide power or capacity to destroy supposed specific organic germs in the living body, as they have recently been of quinine, digitalis, salicylic acid and cold baths, for reducing temperature. Those who, like your reporter, have been in practice nearly half a century, are as familiar with the use (and it might be added abuse) of mercurials in the treatment of all forms of disease, both as alterants and evacuants, as they were with the modern *anti-pyretic* doses of quinine, as antiperiodic and sedative in the treatment of general fevers. And it is fair to presume that the effects of all these remedies will be the same when introduced into the human system, whether given under the ancient ideas of simple alteratives, evacuants and sedatives or the the modern doctrines of antipyretics, germicides and specifics.

Before we go further, however, it may be well to inquire what proof there is that any remedies given internally are capable of acting, really, as germicides —that is, capable of actually impregnating the blood and tissues of the living body in such a quantity as to destroy existing microphites, whether bacteria proper

micrococccci or bacilli, without at the same time destroying the life of the patient ?

Clinical observations alone led me long since to the conclusion that this question must be answered in the negative. That we have many and valuable remedies capable of being administered in such quantity as to diminish or arrest deteriorative changes in the solids and fluids of the living body, I have no doubt. These are properly called antiseptics or antizymotics. But to destroy the vitality of existing bacteria, either as spores or fully developed germs, requires a far more active or concentrated remedy. One of the most valuable additions to our knowledge of this branch of the subject has been made during the past year by Dr. G. M. Sternberg, U. S. A., in a well devised and extcnsive series of experiments, designed for testing the actual germicide powers of a large number of medicinal agents. The results are given in an interesting article in the number of the *American Journal of Medieal Sciences* for April, 1883. It appears from his experiments that the three most active germicides at present known are the bichloride of mercury, permanganate of potassium and iodine. The first was efficient in destroying bacteria and micrococci, when used in the proportion of one part to twenty thousand parts of a solution containing the germs; the second required one part to eight hundred and thirty-three; and the third one to five hundred. If, as is estimated by most physiologists, one-eighth of the weight of the living human body consists of blood, an adult weighing one hundred and sixty pounds would require the presence of six or seven grains of the bichloride of mercury to make one part in twenty thousand of his blood; and no less than two hundred and twenty grains of iodine to make one part in five hundred. These figures, founded on Dr. Sternberg's results, are quite sufficient to show that we have no remedies at present which can be safely introduced into the human system in sufficient quantity to act as efficient germicides. Consequently whatever benéfit clinical experience may have obtained from the use of remedial agents given internally, must have been conferred by some other process than that of destroying bacterial organisms.

It will be remembered that one of the virtues attributed to alcohol as an internal remedy, by several recent writers, is its germicide power. Dr. Formad, especially, placed much emphasis upon this property of alcohol as a remedy in the treatment of malignant diphtheria, recommending it in large and frequently repeated doses. But Dr. Sternberg's experiments show that one of the most easily destroyed germs, the micrococcus of pus, required the presence of twenty per cent. of alcohol for its destruction, while the bacteria termo survived immersion in a solution of 95 per cent. alcohol twenty-four hours. It will be seen that the amount required to be present in the blood of a patient weighing 160 pounds, to destroy those germs most susceptible to its influence, would be about four pounds, or more than a quart of alcohol. This is certainly a much larger quantity than the most enthusiastic advocate of its use would deem it safe to administer. And I may add, as a clinical fact, that I have recently had the privilege of seeing several severe cases of diphtheria under treatment with very liberal doses of whisky and brandy, without the slightest beneficial effect.

IMPROVEMENT IN THE TREATMRNT OF INDIVIDUAL DISEASES.

The medical periodicals during the past year have, as usual, contained many paragraphs stating the results of the use of particular remedies in one or more cases of disease; but they have generally been either some application of a well-known remedy to the relief of a particular symptom, or the number of cases treated has been too limited to afford a basis for reliable conclusions. Therefore, I will not occupy your time with any compilation of suggestions and items that are already accessible to you in the pages of almost every medical periodical you choose to take.

Perhaps the most important improvements made in the treatment of acute general diseases during the past year, consist in the continued decline in the use of alcoholic remedies and of heroic doses of antipyretics, on the one hand, and a gradual return to the use of mild evacuants, alteratives or antiseptics, sedatives, and an occasional venesection. It is true, that the resumption of the use of some of our oldest and most efficient alteratives—as mercury and iodine, and their preparations—is prompted by the prevalent germ theories, on account of their supposed germicide powers; and, as I have stated in another part of this report, there is great danger that, under this idea, their use being aimed, not at the correction of morbid molecular changes in the blood and structures of the body, but at the destruction of some supposed army of microphytes, or germs, will be pushed to an injurious excess, as has already been done with carbolic acid, iodoform, etc., in surgical practice.

The radical error in the therapeutics of the present time, is the effort to cure disease by directing remedies too exclusively against some one of its prominent symptoms—as in combating the high temperature of fever by antipyretics, cardiac weakness by alcoholics —or against the supposed cause, as in the use of so-called germicides. There appears to be a tendency to forget that disease is an unnatural or morbid condition of the properties and molecular movements of the solids and fluids of the living body, or some part thereof; and, when once established, always tends to pass through certain stages of progress or changes, either to health or destruction, even though its efficient cause may have ceased to act. Of course, in the management of disease, it is always important to suspend the further action of its cause or causes; but it is equally desirable to so select and adjust our remedies as to correct the morbid condition of the properties and movements themselves, and thereby prevent the suspension of important functions, or the permanent deterioration of structures. The ideas I wish to convey are well illustrated in the history of the management of typhoid fever. During the last twenty years, two prominent symptoms of the disease have engrossed the larger part of the physician's attention, namely, cardiac weakness and continued high temperature. To counteract the first and prevent

the patient from dying by asthenia, the treatment came, finally, to consist almost exclusively of an abundant supply of nourishment, and an equally abundant supply of alcoholic liquors, to strengthen the heart. But as the disease involved such changes in the properties of the tissues and the molecular movements constituting assimilation and nutrition, that only a moderate portion of the food taken could be properly appropriated, while the excess only fermented, and added to the tympanitis and intestinal discharge; and as the cardiac weakness resulted partly from the impaired nervous sensibility, and partly from fatty or molecular degeneration of its muscular structure, the anæsthetic effects of the alcohol still further impaired vaso-motor sensibility, and encouraged the molecular degeneration, and, consequently, the death-rate soon reached one in five.

Turning from this to the other symptom—that is, high temperature—and, while endeavoring to directly combat it by the cold bath or pack, and other antipyretics, omitting a large part of the alcohol and some of the excess of food, the death rate was reduced to one in ten or fifteen.

And yet, clinical observation is constantly showing that a treatment consisting of a careful adjustment of the quantity and quality of the nourishment to the capacity of the digestive organs to appropriate it, the use of such general alterants as are calculated to sustain the properties of the tissues, and check the tendency to fatty degenerations, and such anodynes as may control local irritations or excesses, the death rate need not be higher than one in twenty-five or thirty, without a drop of alcholics, or any other antipyretic than such sponging of the surface as is grateful to the patient.

In a clinical lecture in the medical wards of the Mercy Hospital, given in January, 1882, I made the following statements in regard to the use of iodine, as a general alterant, in the treatment of typhoid fever:

"The last time I took you to the bedside of typhoid fever patients I called your attention to the effects of iodine. which I had then commenced giving, with the hope that it might be found capable of exerting more nearly the actual alterant and antisepic influence needed, than any of the remedies hitherto used in such cases. Since then I have continued to use the remedy in all the well marked cases of typhoid coming under my supervision, both in the hospital and private practice. Without counting the case before us to-day, which is yet under treatment, the whole number of well marked cases in which the iodine was given as the leading remedy, is fourteen. Seven of these cases occurred in private practice, and the other seven were treated in these wards. Of the seven cases treated outside of the hospital, five came under my care during the first three days afler the patients took to their beds; the other two not until the first half of the second week. Of those treated in the hospital, two were admitted on the third day of the fever, two on the fifth and sixth days, and the remaining three between the seventh and tenth after the commencement of the disease. You will note that nine of the fourteen cases were brought under treatment during the first week after the onset of the disease, and the other five not until the first half of the second week. The treatment in all these cases consisted in the administration of from 12 to 15 minims of the following solution of iodine:

℞ Iodinii .....0.5 grams.....grs viii
Potassii iodidi.....2.0 grams..... " xxx
Aquæ distillatæ..45.0 cc..... ℥jss

These doses were generally diluted with 30 cc. or two tablespoonfuls of sweetened water, and repeated evey four hours for the first three or four days, and then every six hours until indications of convalescence appeared. Whenever the intestinal evacuations became too frequent and thin, a teaspoonful of the ordinary turpentine and laudanum emulsion was given between the doses of iodine. When the temperature rose to 40° C. (104° F.), and the skin dry, the patients were frequently sponged with cold water. Two of the seven treated in private practice took two grains of sulphate of quinia three times a day during the last week of their progress. Nearly all of the seven treated in the hospital wards took small quantities of the mineral acids largely diluted with water during the earlier part of their treatment, and small doses of quinine three or four times in the twenty-four hours during the latter part. All the fourteen were carfully nourished by the faithful giving of milk, wheat-flour and milk-gruel and beef-tea at regular intervals.

"No alcoholic liquors, either fermented or distilled, were given to any of these patients during any part of their treatment. Of the nine cases in which the treatment was commenced during the first week after the patients took to their beds, four convalesced between the twelfth and fourteenth days; three between the fourteenth and seventeenth, and two between the seventeenth and nineteenth. Of the five cases in which the treatment was not commenced until the first half of the second week of the progress, three convalesced between the eighteenth and twenty-first days, and the other two between the twenty-first and the twenty-fifth. No one of the fourteen suffered a relapse, and no case terminated fatally."

During the eighteen months that have intervened since that clinic, there have come under my supervision forty additional cases of typhoid fever, twenty-five of which were in the hospital, and fifteen in private practice. All of these were subjected to the course of treatment just detailed. Of those treated in the hospital, *ten* were admitted during the last half of the first week after confinement to bed, and fifteen not until the middle of the second week. Of the fifteen treated in private practice, all came under my care during some part of the first week after taking their beds. Of these, all recovered in periods varying from twelve to twenty days. Of those treated in the hospital, all who were admitted during the first week recovered. Of those admitted later, one was complicated with broncho-pneumonia, and ultimately died from œdema of the larnyx, after tracheotomy; and another was complicated with symptoms of unusual cerebral hyperæmia, and died during the second week of treatment. The remain-

ing twenty-three recovered in periods varying from fourteen to thirty days.

You will see that the whole number thus far treated with iodine, as a general alterant, under my own care, is fifty-four; of whom two died, or one in twenty-seven. The general character of the cases included in this list was of full average severity, as a large part of them occurred during the unusually severe prevalence of typhoid fever in the last half of 1881 and the first half of 1882. It was very evident that the iodine, in every case in which its use was commenced early, exerted a decidedly beneficial effect, in lessening all the phenomena of the general disease and in shortening its duration. But when commenced at any time after the end of the first week of the patient's confinement, the effects were less marked, though still of some value.

As additional evidence, showing the long-prevalent idea, inculcated in nearly all our modern practical works, concerning the necessity of alcoholic remedies in the treatment of typhoid fever, to be erroneous, I may cite you to an article in the *Archives of Medicine*, Vol. IX, No. 2, April 1883, by Dr. A. W. Nelson, of New London, Conn., in which he gives twenty-eight successive cases of well-marked typhoid fever, treated chiefly with moderate doses of tincture of veratrum viride during the whole course of the disease, rest, and a judicious regulation of diet, and without a single death. Yet alcoholic remedies of any kind were given in only *three* of the cases. In one of these a little brandy or sherry was given on only two days. In another, a small quantity of brandy was given on five days; and in the third, whisky was given, with milk, during ten days of the treatment, the case running a more protracted course than any other one in the list.

PREVALENCE OF EPIDEMICS.

The collection of information regarding the prevalence of epidemic diseases in different parts of the State, during the past year, was kindly undertaken by my colleagues on the committee, Drs. B. M. Griffith, of Springfield, and J. F. Todd, of Chicago. The results of their diligent inquiries I present in the following short communications:

"W. J. Chenoweth, M.D., of Decatur, Ill., says: During the past fall and winter we have had an epidemic of scarlet fever of so mild a character as not to demand treatment. When called on to prescribe we have advised inunction of lard and confinement indoors, with the liberty of the house. There has been but a single death from the disease so far as we know, and that was from suppuration in the middle ear, and retro-pharyngeal abscess, some two weeks after the rash had disappeared.

"Diptheria has prevailed extensively. But few cases have died—none where the deposit was confined to tonsils and fauces. We are using a gargle of warm water and salt, or chlorate of potash, and giving quinine and whisky internally; but have no confidence whatever in any specific treatment. Mrs. ——, of Decatur, had a severe attack of nasal diphtheria, which was followed by a general paresis and a condition similar to *delirium tremens*, which lasted for about two months, when convalesence was finally pronounced, and health established in about six months. When at her worst she imagined that her body was covered with vermin; that loathsome reptiles crawled up her throat and out of her mouth; that her bed was filled with beasts of every imaginable size and shape, rolling over each other ceaselessly; her best friends held high positions in government, or were plotting to injure other friends. After trying other remedies, we found that four grains of quinine and one grain of extract cannabis indica, given from four to six hours apart, controlled these hallucinations, and gave relief to the formication and pain. So marked were the effects of the drugs that her nurse learned how to time the doses with considerable accuracy. Neither medicine seemed to act alone.

"There have been a few cases of whooping cough, but it has not yet assumed an epidemic form.

"About the middle of December we began to witness cases of a disease which has since assumed an epidemic form. The prominent symptoms are, suppression of urine; extreme nausea; constipation, with a paroxysm of fever at night. Albumen in the urine has not been constant. The disease has not proved fatal, and has usually yielded, after four or five days, to mild purgatives and hot water packs.

"Articular rheumatism has prevailed extensively. At first we gave salicylic acid, but found that no cures followed. We then resorted to quinine, opium and purgatives, with better effect. We now give wine of colchicum seed, in teaspoonful doses, until it vomits, purges, and sweats—and feel satisfied that the cures are more prompt and more certain. The disease yields readily as soon as free catharsis or sweating occurs, and in many of the cases the patient is entirely well from an apparently severe attack in a week or less."

J. M. Henry, M.D., Rockford, Ill., says: "In reply to your questions on postal of March 5, concerning diseases in my vicinity, would say: We had last summer an epidemic form of dysentery, extending over several weeks. Some of the cases were attended with severe congestion of mucous membrane, of the colon and rectum. A few of the cases ended fatally, but a great majority terminated in recovery. Nothing very peculiar as to its character or treatment. Our treatment in a majority of cases consisted in giving saline laxatives or castor oil, sometimes preceded by small doses of mercurials; after which we used ipecac and opium, in large doses, combined with subnitrate bismuth, to control the tormina and tenesmus. In nearly all the cases, we found it necessary to give sulph. quinine, to neutralize malaria, which was present. We used it in three to five-grain doses, every three hours. In cases where we found much tenesmus, we used starch water and laudanum or morphine. We tried large doses of ipecac repeatedly, without success; could not effect what is ascribed to it by some authors.

"We had, during the fall, considerable whooping cough, which was not attended with any peculiarity, but ran the usual course, and called for but little treatment. The prevailing fevers have been of the malarial character, requiring quinine or cinchonidia,

sufficient to produce cinchonism. We have had very little purely typhoid fever here during the last year. Its place has been taken by what we (for want of a better name) call typho-malarial fever. It begins with remissions and exacerbations, resembling remittent fever, but not yielding to quinine. Assumes a continuous form, and requires careful watching, not too much medication, and early support. I find some very obstinate cases of third-day ague, which required the continued use of quinine, combined with some alterative, to eradicate. I have been using, with success, quinine and iron, alternated with tincture of iodine in such cases.

"We have had less pneumonia to treat during the past winter than usual. Nothing peculiar in character of the cases I have seen; nothing new in way of treatment. We have had less sickness in our vicinity for the past year than for the year previous thereto."

H. H. Littlefield, M.D., Beardstown, Ill., says: "In response to your circular, I have to say that no epidemic disease has prevailed in this locality during the past year; but a nervous disturbance has been a prominent symptom, in connection with or attending many of our fevers, tending to paralysis or congestion of, or upon, the brain. The old "nervous fevers" seem to be returning upon the people, with partial palsy."

"Cephas Park, M.D., Oquawka, Ill., says: Henderson county for the past year has not been visited with any epidemic disease from March 1, 1882, to March 1, 1883, but parotitis, which is very prevalent in this vicinity and in places in different parts of the county. It is universal, almost, in every family that has not had it. Its character for severity is unusual, especially among males. Where metastasis takes place, so far it has been invariably about twenty-four hours before the parotid becomes sore or any swelling takes place. In many cases they are affected all over, and but very little swelling or soreness of the gland. Complain of great muscular pains in arms, legs and body, with an intolerable thirst and complete loss of appetite. This condition lasts from two to six days, and generally results in metastasis to testicle. Very slight cerebral disturbance; nothing more than slight delirium when the fever runs high, lasting but a few hours. Duration, from five to twenty days before the patient is able to leave the house or assume his usual duties. In those whose testicles become involved, about the subsidence of the swelling and a general letting up of the disease, they are affected with considerable nervous prostration. The pulse becomes slow and weak; frequent sighing; anxious looks in some, of impending danger—all of which leaves upon recovery. This epidemic commenced in February, and is still in full blast. The month of February, and this month so far, has been cold and changeable, which has probably been the cause of its severity. Have been more particular in describing this epidemic, as it is the first for parotitis that I ever witnessed, and I have been in practice for thirty years. Mumps used to be considered a trifling matter, both by medical men and the general public. With those who have them and those who have not had them, in this vicinity mumps are looked upon as a matter of great dread.

"The general health of our county has been good for the three years past. No enteric fever. Bilious, and bilious remittent and intermittent fevers are all the types. With some of our profession, a few days of bilious, remitting fever are diagnosed as typhoid fever. You may get reports from other parts of the county that typhoid has prevailed. If so, you will understand where our difference lies."

C. A. Palmer, M.D., Princeton, Ill., says: "Yours of March 1st received. In reply, I would briefly say that during last July and August we had a large run of dysentery, generally easily controlled. During the fall, a large amount of malarious complaints, which continued until as late as December. A general run of measles during the cold weather, complicated with pneumonia, many cases proving fatal, as was the result in quite a number of cases of lobar pneumonia during the cold weather.

"During the past six weeks we have had a peculiar endemic, that I have given no name to, as I could not exactly find one to fit. Probably fifteen per cent. of the inhabitants suffered from it. The patient was generally taken with a chill, which, in many cases, was repeated several times. Pretty high fever (temperature from 102° to 104°); headache; dumpishness; heavy coated tongue; very severe pain and soreness of the muscles, especially those in the back of the ne k, and back generally; urine very scanty, and loaded with triple phosphates. The course was generally about a week—some recovering in three days, some in four weeks. If a case ran one week without improvement, it generally assumed a typhoid character. The treatment found most beneficial was a combination of salicylate of soda, tincture gelseminum, and fluid extract phytolacca decandra."

In regard to Chicago and its vicinity, I can report the prevalence of no well-marked epidemic disease during the past year. Typhoid fever, diphtheria, scarlet fever, pneumonia and cerebro-spinal meningitis have all prevailed to some extent. The general character of the cases of diphtheria and scarlatina has been mild, though some cases of both have presented a malignant aspect. The number of cases and deaths from typhoid fever, though above the usual average for a number of years, is below that of the previous year; while that of pneumonia has been decidedly increased. The relative prevalence and special characteristics of this latter disease was the subject of a short paper that I recentiy presented to the Chicago Medical Society, and which was published in the April number of the Chicago *Medical Journal and Examiner*, from which I copy as follows:

"In regard to the special characteristics of the cases of pneumonia which have occurred in this city the past year, I am not, perhaps, as well able to judge as many of you, my opportunities for observation having been limited mostly to hospital and consultation cases. Such observations as I have made have led me to think the great majority of cases were accompanied by the dullness of expression, softness of pulse, mental wandering, dark color of the bloody sputa, and occasional looseness of the bowels, that would

require classing them as typhoid in their grade and tendencies.

"In some of the cases coming under my observation, the cerebral symptoms were unusually prominent, and in two or three cases they were manifest in an unusual manner. The first symptoms were very severe pain in head, most severe in the occipital region, with great restlessness and anxiety, hurried breathing, and only little elevation of temperature. After about twenty-four hours the pain drifted to the lower part of one side of the chest, extremely acute, causing the respiration to be short or stifled, very frequent, and pulse sharp and quick; but the closest examination detected neither the friction of the first stage of pleurisy, nor the crepitant râle of pneumonia; nor the dullness on percussion of the second stage of either. After the pain in the side and other symptoms mentioned, with temporaay feeling of sinking, had continued for nearly forty-eight hours, the pains ceased, the mind became calm, but the pulse and respiration continued short and frequent, like one weary from physical exertion, and giving exaggerated or puerile respiratory murmur, but no râles or dullness over any part of the chest, and no expectoration. During the next twenty-four hours, however, the patient became gradually more dull or drowsy, the respiration shorter, with first crepitant râle over the right side of the chest, which gave place in less than eight hours to submucous râle, some bloody expectoration, and marked dullness on percussion, with a weak and frequent pulse. In less than twenty-four hours after the first indications of pneumonic exudation, the whole of the right, and the lower part of the left, lung were completely filled with the exudative material, and the patient died.

"Another of this class was marked by a decidedly hysterical order of nervous symptoms; and after suffering excruciating pain, vacillating from the lower half of the left side of the chest to the head, often for several days, without developing any physical signs of either pulmonary or cardiac disease, there supervened well-marked symptoms of pneumonia, limited to the lower part of the left lung, quickly followed by endocarditis. These symptoms had progressed only about twenty-four hours, when the patient was seized suddenly with some convulsive movements, and shrieking, as if from intense pain. In this emergency a physician was called in, who administered morphine, both by the mouth and hypodermically. The patient soon fell into a sleep, from which she could be partially aroused six or eight hours later, but lapsed into stupor again, and died about twelve hours after the convulsion. In several other cases, the cerebral symptoms came early, and presented the delirium analogous to that often present in the more active grade of typhoid fever. During its continuance, the respiratory movements became less and less efficient; the moist râles more prominent; the pulse soft, weak and frequent; the extremities cool, and skin generally relaxed and wet with perspiration.

"In all these cases, the urine was scanty, and deficient in the chlorides, and was sometimes voided with difficulty. One of these patients died at the end of the first week after the attack, another on the eleventh day, and the rest recovered, in times varying from nine to twenty-one days. All the fatal cases manifesting unusual cerebral symptoms occurred in private families, in which no post-mortem examinations could be obtained. Those coming under my own observation were in the south half of the West Division of the city; and it may be proper to remark that cases of cerebro-spinal meningitis were occurring with unusual frequency coincidently in the same part of the city.

"With the exception of the class of cases I have just been describing, the general character of the symptoms in the pneumonic attacks of the past year in this city has been such as to indicate a decided typhoid or asthenic grade of morbid action. In only a few instances has the fever in the early stage exhibited such a degree of periodicity as to indicate the presence of a distinct malarious fever.

"In regard to the treatment of pneumonia, I will detain you for only a few words concerning the more important items or questions that the subject suggests. The three principal sources of danger to life from acute pneumonic inflammation are, first, the extent and intensity of the vascular engorgment in the first stage of the inflammatory process.

"When the disease attacks the greater part of both lungs simultaneously, constituting full double pneumonia, as it occasionally does, both in children and adults, the compression of the alveoli or air cells from the over distention of the network of capillaries surrounding them may diminish the amount of air received to such a degree as to prevent the oxygenation and decarbonization of the blood. The respirations become hurried, panting and unsteady; the pulse feeble and frequent, while the heart at first beats excitedly, but soon gives indications of weakness and unsteadiness; the mind at first excited and anxious, soon becomes dull, and in some cases incoherent, while the whole external surface, including especially the face, neck and trunk of the body, appears first congested, then mottled with purplish spots, and finally cyanosed with cold extremities, entire collapse and death. Such cases in which the fatal results is from apnœa, or the direct exclusion of air, are of rare occurrence—not more than five or six having come under my own observation in a period of forty-five years.

"The second, and much more frequent source of danger to the life of the patient, is the amount of the exudation into the lung tissue and alveoli during the second stage in the progress of the disease. The exudation exerts a two-fold influence, namely, by depleting or actually diminishing the amount of blood in circulation, and by diminishing the oxygenation and decarbonization of the blood from the exclusion of air from a large proportion of the alveoli of the inflamed part of the lung. With from one to three pounds of the elements of blood taken out of the circulation in the form of exudative material, and solidified in the alveoli and interstitial spaces of the lung structure, thereby excluding an equal bulk of air, you will readily see how a strong sedative or depressing effect is produced on the functions of both respiration and circulation, and why the cardiac force

should be impaired, even to a dangerous degree, in the early part of the second stage.

"The third source of danger is from the extent of purulent degeneration of the exudate, causing grey hepatization or diffuse suppuration instead of resolution, and progressive exhaustion of flesh and strength until death results from asthenia. It is thus evident that the cardiac weakness in the different forms, or rather stages of pneumonia, which nearly all writers of the present time mention as the chief source of danger, and on which they found their use of particular remedies, is only a symptom or effect, resulting in the first and second stages from the sedative effect of imperfectly arterialized blood, and in the third stage chiefly from the extent of the suppurative process in the inflamed structures.

"If these views concerning the actual pathological conditions that may endanger the life of the patient are correct, the objects most necessary to accomplish by treatment become obvious and well defined namely, first, to limit the vascular fullness or accumulation of blood in the vessels of the inflamed part and lessen the morbid excitability of the texture in the first stage; by which we shall prevent a dangerous degree of direct compression of the air cells in double pneumonia, and most efficiently limit the amount of exudation which is to constitute the chief source of danger in the second stage.

"There are three practicable methods by which the quantity of blood in a part may be diminished. First, by abstracting part of the blood, as by venesection, local bleeding and other evacuants; second, by diminishing the force and frequency of the heart's action by cardiac sedatives; third, by increasing the tone or contraction of the smaller vessels of the part, through the agency of the vasomotor nerves.

"That a prompt free bleeding in the first stages of active pneumonia is capable of lessening the fullness of the pulmonary vessels and relieving the pressure on the alveoli in a marked degree, I have demonstrated so many times as to have no possible doubt of its reality. It is equally true that such relief will, in a large proportion of the cases, prove temporary, if relied upon alone; but if followed by the prompt and judicious use of such cardiac sedatives, coupled with mild anodynes, as will lessen the force and frequency of the cardiac action in the more sthenic cases, and by efficient doses of such remedies as promote an increase of the tone or contraction of the pulmonary vessels in the malarial and asthenic cases, the advantage gained by the bleeding will be perpetuated, thereby rendering the amount of exudation and red hepitazation to constitute the second stage much less, and insuring an earlier and more perfect recovery. It is true that in all the milder more limited cases of unilateral pneumonia the venesection may be dispensed with, even in the active or sthenic type of the disease. In such the cardiac sedatives during the first stage, accompanied and followed by a combination of anodyne and expectorant remedies, with rest and proper nursing, is all the treatment required. But it is equally true that, in the more severe cases of this type, the omission of the bleeding at the proper moment greatly increases the danger of unfavorable progress, and has in times past been the occasion of many fatal results. When the pneumonic inflammation occurs in persons whose blood and tissues have been under the habitual influence of malaria, the effect of quinine in from five to ten-grain doses, in restoring the tone of the pulmonary vessels and repressing the general febrile symptoms in the first stage, is in most cases prompt and efficient. I have seen some cases of this variety completely arrested within the first forty-eight hours after the initial chill, by taking five grains of sulphate of quinia with one of calomel and one of pulverized opium every three hours the first day, and every six hours the second. After the latter a mild laxative to move the bowels, and three grains of quinine three times a day for four days, was all the treatment required. In all ordinary cases occurring under malarious influences, the prompt and judicious use of quinine may take the place of bloodletting in the first stage of disease. But when the the attack is severe, involving a large portion of one lung or portions of both lungs, and the patient comes under observation within twelve hours after the chill, a bleeding of from twelve to twenty ounces will render the action of efficient doses of quinine and opium more prompt and certainly beneficial than it would be without such loss of blood. When pneumonia occurs in the midst of sanitary conditions, favoring the prevalence of typhoid and typhus fevers, our reliance for diminishing the vascular engorgement of the first stage must be mainly on the use of quinine, ergotine, and sponging the surface with cool water, or covering the whole chest with emolliment poultices.

"I have called attention thus fully to the treatment of the first stage of pneumonia, and the different agents that may be employed for accomplishing the same general object (relief of the vascular engorgement of the inflamed structure), and their adaptation to the treatment of cases occurring under different ætiological conditions, because it is only by acting in this first stage promptly and judiciously, that we can materially limit the amount of exudation which is to follow, and determine the danger or safety to the subsequent stages of each case. I had intended to allude to two or three other items of importance in the treatment of the second and third stages of the disease, but I have already occupied too much of your time, and will defer them until another opportunity offers."

HYGIENE OF LOW DIET.

BY GUSTAVUS SCOTT FRANKLIN, A.M. M.D., FELLOW AMERICAN ACADEMY OF MEDICINE.

[Read before the Ross County, Ohio, Medical Society.]

In certain diseased conditions of the human body both theoretical and practical knowledge teach us that the ordinary food of a healthy person is inappropriate, oftentimes very harmful. The results of modern physiological investigation, supplementing and confirming, in scientific manner, the clinical ex-

perience of numberless acute and observing physicians have made plain to every medical student of the present day, that when the digestive functions are not in fair working order the amount and quality of the food to be taken should be a matter of careful consideration.

Modern physiology tells us that in all acute diseases when the pulse is high and the temperature increased, the digestive apparatus is not in a proper condition to work up and to assimilate ordinary food; that all the digestive fluids—the bile, the gastric, the pancreatic, and the intestinal juices—are much diminished in quantity and much altered in quality, that food, if not digested and absorbed, is worse than useless because it quickly decomposes in a feverish stomach, and the irritating products of such decomposition are capable of increasing fever and general distress. Long before these facts were demonstrated as a matter of science, Hippocrates recognized them clinically and did not deem it unnecessary or undignified to teach posterity in voluminous words how to make properly his favorite barley ptisan. Most of this clinical knowledge was, of course, purely epirical until Dr. Beaumont demonstrated upon the person of Alexis St. Martin, and Dr. Schmidt upon Caroline Kutt, many of the physiological principles which govern the scientific practice of the present day. Dr. Beaumont saw and exhibited to others the moist velvety surface of the living, healthy stomach, and the quick and plentiful response of gastric juice on introducing food. He also demonstrated the dry, glazed and turgescent mucous membrane of a stomach suffering from the effects of fever and the poor digestion of food with little or no normal gastric juice to work it up and prepare it for assimilation. He also found that very thin and watery foods were absorbed by simple endosmosis into the blood vessels of the alimentary canal. This exact and visible demonstration of facts, long before accepted empirically, is only too seldom made the basis of therapeutical food-administration at the present day, and even the well educated physicians present will not, I hope, consider me presumptuous in calling their attention to the subject.

The experience of Hippocrates and his successors, and the more exact and definite experience gained in hospitals where trained nurses could guarantee the exact carrying out of all instructions, could report symptoms precisely as they arise, and thus the physician could be better assured of his facts, has led to a therapeutical division of foods into at least four classes. In American hospitals these classes are generally called: (1) full diet; (2) half diet; (3) low, fever or spoon diet; (4) special diet. Full diet is given to those patients who are entirely free from fever, having normal pulse and temperature and who show by a vigorous appetite and a ready, painless digestion that the system demands and is able to care for something similar to the ordinary food of a healthy man. Half diet is ordered for those who are recently convalescent, free from fever, having a normal pulse and more hunger than the sparer diet will satisfy, but whose digestion is not thought vigorous enough to manage full diet. Low fever or spoon diet is ordered for those whose feverish temperature, frequent pulse, loaded tongue, dry mouth and skin, irritable stomach show their inability to digest and absorb anything that cannot readily be taken into circulation through the veins of the stomach by osmosis. Special diet is ordered by the attending physician when he considers it necessary to tickle the palate of the patient or to meet some special indication.

The composition of low diet, which is the present subject of consideration, includes such thin and easily absorbed foods as may not in any way excite or distress the stomach when it is almost if not quite unable to digest anything. The rule to regulate our advice should be—the higher the fever, the thinner and more bland the food. Food and drink together, given frequently and according to the apparent necessities of the system, is thus secured. Among such foods may be named toast-water, rice-water, barley-water, gum-water, wine wheys, as the thinnest, most easily absorbed, least likely to distress the stomach, or to increase fever, and yet nourishing enough for use during a short period. If fever is not very high, or prostration, as evidenced by feeble pulse and loss of strength, be noticeable, then gruels, preparations of milk, beef-tea, mutton broths, cream soup, egg soup, wine soup, egg nogg, and other similar nutritive and sustaining foods, may be appropriate. When the fever is past, with but little likelihood of a relapse, thicker and more nourishing foods may be allowed cautiously.

Just here let it be observed, that the caprices and fancies of the sick-room are out of place, and should be courteously but firmly discouraged when the illness is of an acute and serious character. This caution is even more applicable to food than to medicine, since every good-hearted neighbor may be unwittingly working to defeat the best devised schemes as to proper nutrition. It should be the duty of the attending physician to explain his wishes thoroughly, to give explicit orders and instructions, and to see that his directions are carried out as exactly as possible. This can easily be done in well-regulated hospitals, with their corps of well-trained nurses—such nurses as we hope to see more frequently hereafter in private practice.

Within the range of foods mentioned above there is a remarkable field for the exercise of sound judgment and a scientific pathology. Certain articles of food being better adapted to certain conditions, should most assuredly be assigned to those conditions when it is possible. In my experience, a full, quick pulse, high temperature, loaded tongue and irritable stomach, is preferably fed by well made barley-water, which is nutritive, laxative and diuretic. If the patient cannot take the barley-water, either from caprice, or from natural disgust, or from want of will-power, or because it is badly prepared, try the toast-water, which is bland, unirritating and nutritive; or the rice-water, which is nutritive and slightly astringent; or the gum-water, which is demulcent and nutritive; or the wine wheys, which are nutritive, stimulant and sudorific. Just as soon as the temperature reduces and the pulse falls, especially if prostration of strength

is apprehended, the sparer diet should be made more nutritive and strengthening. Barley gruel, oatmeal gruel, cornmeal gruel, milk, cream soup, egg soup, beef-tea, mutton broth, egg-nogg, etc., have their proper places and their indications. Increase of fever, pain in the stomach, vomiting, flatulence, and diarrhœa, are finger-posts to warn us that we are on the wrong road; that we had better change the diet as circumstances dictate.

A fair knowledge of food therapeutics can only be acquired after careful investigation into the specific character and value of foods, and when clinical experience confirms the theories we form, the conscientious physician is very apt, like Hippocrates, to become an enthusiast on this subject. I believe my own studies on food dietetics have borne rich fruit in my practice, and I am certainly increasingly fond of informing myself on everything which relates to it. In this line of study we learn how to nourish, and still not to inflame; how to feed the stomach, and yet not to produce an excess of bile; how to supply a demand for strength, and not load up the enfeebled system with irritating detritus; how to feed the patient, and not the fever; in fine, how to restore to health, and not allow either starvation or repletion to snatch a victim from under our very eyes. The clear recognition of the need of our fever patient for demulcents, or for laxatives, or for diuretics, or for sudorifics, or for astringents, or for stimulants and the ability to supply these needs at least approximately by the scientific use of food, leads to great clinical triumphs, and is a source of immense satisfaction. The ideal treatise on this subject is yet to be written, and probably awaits a companion treatise on pathological physiology, which needs another St. Martin and a more highly educated enthusiast than Beaumont to limn its outlines.

PARALYSIS OF THE FACIAL NERVE IN CONNECTION WITH DISEASES OF THE EAR.

BY LAURENCE TURNBULL, M.D., PHILADELPHIA.

[Read before the Section on Ophthalmology, Otology and Laryngology of the American Medical Association, June, 1883.]

Diseases of the ear and their connection with general medicine is a subject of grave importance, and the general practitioner who neglects or omits their study will often fall into serious errors of diagnosis, and of necessity be unsuccessful in treatment.

Acute and chronic disease of the middle ear will give rise to temporary or permanent facial paralysis, alteration in taste or smell, sight, and even gait. False epiliptiform convulsions, hemiplegia and insanity are also due to reflex phenomena, from irritation and compression of the sensory and motor nerves of the ear, or the result of necrosis of portions of the temporal bone. It is now a well recognized fact that pyæmic abscesses in the brain and some forms of rheumatic fever have their starting point in the middle ear.

Paralysis of the parts supplied by the facial nerve occur and are the result of acute inflammation of the middle ear, followed by accumulated secretions in the fallopian canal, eustachian tubes, or necrosis of the mastoid cells.

A number of cases of facial paralysis have occured in the Aural department of the Jefferson Medical College Hospital, one of which has already been reported in the author's paper[1], and additional cases will be of interest in this connection.

Case I.—The history of the first case I will state briefly. It occured in a woman aged fifty, the subject of a malignant tumor situated in the tympanum, and caused originally by a polypus, which gradually extended, involving the osseous meatus, auditory canal, temporal bone, and passing out through the auricle, until it formed a large double tumor. The lesion was situated between the petrosal branches of the fifth nerve, involving the chorda tympani. The periostitis caused irritation and pressure, which ultimately involved the brain, and was followed by death.

Case II.—A young woman who was under the care of our colleague, Dr. James C. Wilson, one of the physicians to the Jefferson College Hospital, was refered for our opinion in reference to the condition of the ear.

September 28, 1881, Josie E., aged 24, presented herself with almost entire facial paralysis, caused by exposure and a life of dissipation within a short period.

I found the hearing of one side much impaired; right ear watch not heard on contact; left eār was fair, rather less than normal.

Tuning-fork heard in air on left side; right not even on contact, nor in the air; voice had to be elevated in tone.

Discharge, none. Tinnitus like "waterfall."

External meatus filled with desquamative epithelium.

Mem. tympani, right, thickened and sunken.

Mem. tympani, left, normal with good reflex.

Chronic pharyngitis, tonsils enlarged.

Cause specific inflammations of internal and middle ear; no hereditive deafness. Health has not been good.

Complicative paralysis of the facial nerve implicating chorda-tympani.

Treatment.—Has been taking potassii iodidi, 40 grains three times a day, with use of Faradaic current; removal of desquamative epithelium and opening the eustachian tubes.

After two weeks H D improved to R $\frac{13}{18}$ inches, watch right, and left to 8 feet.

Gradually the paralysis nearly disappeared, with almost entire recovery of hearing, before she left the hospital.

The history of the third case was referred from the eye department for examination by Dr. Wm. S. Little, chief of the opthalmic clinic of the Jefferson College Hospital.

John L. White, aged 17, while passing out of his house was attacked by a drunken sailor who, mis-

[1] Morbid Growths of the Ear and their Treatment, with Illustrative Medical and Surgical Cases, by Laurence Turnbull, of Philadelphia. Tras. International Medical Congress, London. Vol. III., p. 339. (1881.)

taking him for a person against whom he had a grudge, stabbed him in the ear with an oyster knife. It entered the meatus and passed downwards and outwards not dividing the membrana tympani, but a branch of the fifth nerve paralyzing the facial. The young man cannot close the eye of the left side because there is paralysis of the orbicularis palpebrarum. The following is his clinical record, No. 1374: March 22, 1882.

Richmond. Va., Glass Factory employe—R. E., $\frac{18}{36}$ L. E., $\frac{18}{36}$; tuning fork in the air; discharge R., none; L., muco purulent: pain none; tinnitus like a "steam engine." Cicatrices in auricle at orifice of meatus of L. side; L. membr. tympani white and irregular; handle prominent; eustachian tubes both open; chronic pharyngitis; tonsils normal; duration, four months; cause, stabbed by an oyster knife in left ear; constitution, good; complications, facial paralysis. Diagnosis, "otitis medie plastica traumatica" L. E.; traumatic division of chorda tympani from punctured wound of meatus in the floor of tympanum; referred to eye clinic for treatment; recommended use of galvanic battery and potassi iodidi; entirely recovered.

As these cases are rather rare forms of facial paralysis, I will dwell upon the subject for a short period. Most of the cases of facial paralysis which are met with are of a peripheral origin, or outside of the brain and constitute what is known as Bell's palsy or paralysis. Such come on suddenly from exposure to cold in a railroad car or when overheated from sitting opposite a crevice in a window or door. This form of paralysis is generally attended by pain, and as the pain is relieved the paralysis shows itself; the pain, however. is not in the facial nerve, as it is a nerve of motion, but is generally of a rheumatic character and from some irritation of the fifth nerve. To locate the lesion as I have already done, the student must study the anatomy of the nerve. The facial nerve emerges at the lower border of the pons-varolii, near the medulla oblongata. From this origin a large number of fibers may be traced backward into the pons where, on the border of the floor of the fourth ventricle, it connects with the same nucleus as the eighth or portio mollis. It is also connected with the nerve by a small fasciculus, the portio inter duram et mollem.

The nerve then passes forwards upon the crus cerebri to the auditory meatus. Entering the first upon the inner side and then upon a groove in the auditory nerve then into the aqueductus Fallopii, and following its tortuous course throughout to its exit at the stylo-mastoid foramen. In this aqueductus it gives off three branches; the superfacial internal and external petrosal and the chorda tympani. By the superfacial petrosal it is connected with Meckel's ganglion to which it supplies its motor root.

In our first case the paralysis is due to a periostitis affecting the facial nerve and the brain by pressure. In the second, it is the result of syphilitic gummata, and in the third to traumatism.

In the first case, there was profound deafness of that side; in the second, partial deafness, which was removed by the administration of iodide of potassium and the use of the galvanic current; and in the last the deafness was very slight. In examining the throat of the third case we find no deviation of the palate or uvula, and that the paralysis is located on this side of the great petrosal nerve. The record of the hearing, you will notice, is almost normal, and the same on both sides. Now, if the lesion were back of the smaller petrosal branch the tensor-tympani would be paralyzed, and the laxator muscle, making the membrane less tense, the hearing would be less acute.

Patients with the lesion located back of this nerve have a very acute or painful sense of hearing, and cannot bear even a loud cough, sneeze or sound without distress.

The value of electricity in the treatment of these cases is that it stimulates the muscles, and if the faradic current causes no response we must not give up the case, but employ the galvanic current. In the case of paralysis from traumatism, the faradic current caused muscular contraction, and the young man improved and was able to close the eye April 15, 1882. To apply the current, place one pole, negative, back of the ear, and pass the other pole, positive, over the peripheral distributions of the nerve and obtain contraction of the muscles of the face. The strength of the application should be perceptible, but not painful; and as long as response be obtained; even by a faint current, there is hope for improvement.

By way of illustration, I have collected three other cases, all differing from the first reported. I may here state, in passing, that there may occur a form of facial paralysis by simple swelling of the nerve in connection with a chronic suppuration in the middle ear.

In expressing an opinion as to the existence of facial deviation in a doubtful case it must not be lost sight of that an unsymmetrical condition of the mouth may and often does exist in some persons.

Reporter, DR. C. J. BAKER, of Boston.

[Trans. Am. Otological Society, Vol. 2, Part 3, p. 353. 1879.]

No. 1.—Age, 17; sex, female; duration, 12 years; cause, scarlet fever; discharge, otorrhœa.

Treatment.—Astringent applications to throat, inflation tonics, syringing and astringent instillations.

Result.—(March) Greatly improved in general condition free from pain or vertigo; slight discharge from the ear, and polypoid mass diminished in size by the use of alum. Facial paralysis the same. (April 16) Patient placed under Dr. S. G. Webber, of Boston. Faradic reaction entirely gone, and galvanic reaction only in a few muscles about the angle of the mouth. Under continued use of galvanic current, the eye could be closed about three millimeters; the corrugator muscles had not recovred, and there has been gradual though slight imerovement in voluntary action of the facial muscles.

BY EUGENE FRANKEL.

(Arch. of Otology, Vol. ix, No. iii, p. 211. September, 1880.)

No. 2. Age, 28; sex, female; from infancy; cause, the absence of a bony wall separating the facial nerve from the drum cavity, caused by a direct compression of this nerve by the plug of inspissated exu-

dation filling that roomy cavity in the petrous bone. (See autopsy). Purulent discharge.

Three days' treatment in hospital; violent headache, for which patient took large dose of morphia; patient died May 5, after gradually increasing coma.

Autopsy.—In brief, cochlea internal meatus and the nerves terminating within were intact; the facial in its course between the two bends of the fallopian canal also offers nothing noteworthy; below the second bend the wall toward the drum cavity is destroyed, and the nerve is separated from the plug of exudation filling the above mentioned cavity, only by a thin mucous membrane.

The first case is interesting in regard to the location of the polypoid growth, in the posterior portion of the tympanic cavity, and that pressure on the mass and upon the region in front of the ear, causing severe vertigo; in connection with the observations of Politzer on the occurrence of openings in, or thinning of the bony wall of the facial canal; in relation, also, to a previous and evidently severe inflammatory process within the tympanic cavity, which may in its results have paved the way for the peculiar symptoms occurring with the lattér disease; and also of interest as concerns the degree of recovery attained after a facial paralysis existing for a long period, as shown by the results of the treatment above given by Drs. Blake and Webber. Occurrences of the nature in the first and second cases render intelligible the well established fact that paralysis occurring in the brain, with purulent otites medea, may stop[1] as soon as the cause maintaining the paralysis ceases. Absorption of the masses of exudation compressing the nerve is certainly not impossible, if proper and careful treatment is followed. Green[2] reports a case (death ensued from meningitis), no cerebral abscess present, in which the fallopian canal was likewise open towards the drum cavity, so that the facial nerve appeared covered directly with the swollen mucous membrane.

THE SCIENTIFIC DUTIES OF MEMBERS OF MEDICAL SOCIETIES.

BY H. B. HEMENWAY, M.D., KALAMAZOO, MICH.

[Read before the Kalamazoo District Medical and Surgical Association, Sept. 25, 1883.]

The physician is a scientist and an artist. In but few individuals do we find the two combined in equal proportions. In some the artistic principles are predominant. Others have come to devote nearly their whole attention to the science of physic. The latter form by far the less numerous class. The art and the science are therefore distinct, but they are also intimately connected. The former, as old as the human race probably, is very successful when founded upon scientific principles; while the other had its origin in the art.

We have just said that the art is only successful when it is founded upon scientific principles, and yet it is a well-known fact that the most learned are often very poor practitioners. On the other hand a very ignorant man may be eminently successful, especially in some particular line of cases. This is no refutation, however, of the statement made. Our best instructors in music are very often very ordinary players. They understand what makes sound, music, and discord. They may be thoroughly acquainted with the laws of harmony and with the method of instrumental manufacture in all its minutiæ, but they have not such command of their muscles as to do as well as they know, and in execution frequently the scholar excels the master. The same is true, though probably in a less degree, in our own profession. The empiric is not conversant with the truths upon which his treatment is based. Others have worked out problems to which he remembers the answers. It is a lamentable fact that too often the country physician permits himself to drop into this sort of quackery. He may have had the best of college education. He may have been under the guidance of the most learned of our profession. As he left his *alma mater* he may have done so under the most auspicious circumstances. When he becomes established in practice, however, he has occasion, for example, to dispense his own medicines. For a cathartic he gives the compound cathartic pills of the pharmacopœia. He finds them satisfactory, and buys them by the wholesale rather than make them himself. In the course of time he forgets the exact composition of the pills, but he gives them right along, thinking not so much of the special bearing of each drug upon the case, as that he wants to get a movement of the bowels, and they do the work. He desires something to relieve pain. P. D. & Co.'s chloranodyne is handed him. He tries it, likes it, and adds it to his list. "Tougaline" is his remedy for rheumatic neuralgia, but in nine cases out of ten, the doctor prescribing it cannot tell its composition. If he is reproached with using these ready-made preparations, he will tell you that he has not time to compound drugs. He has tried the combinations and is satisfied with the results. He knows about what cases this or that remedy is good for, and where it will do harm. Why not then designate each combination by a special number? What is there out of the way in a local drug firm scattering hand-bills, which tell the people that Dr. T's No. 29 is a specific for dyspepsia, and No. 45 is highly recommended for "female weakness?" If it is known that Dr. A prescribes "Dyspepsum," why should we object if druggist B recommends "Ingluvin?" The time is not far in the past when a president of our own State Medical Society was sending to lady patients all through the country two kinds of powder, both bi-carbonate of sodium and chloride of ammonium, I think, but one was colored with cochineal. How much worse is that than if he had put them upon the market labeled "Zoa-phora?"

There is another objection to prescribing ready made mixtures. The physician becomes less discriminative in his use of drugs, and is thus led to use more than is necessary. Take the use of Dover's Powders for a "cold." It is by no means impossible that in very many cases the result would be as perfect without the opium, and there would not therefore be the risk of getting the opium habit.

This is not the only danger for the country practitioner. He finds his time so fully occupied that

his journals do not get the thorough reading which he desires. His cases are so far apart that he can not so easily study them critically as he could if they were side by side in the wards of a hospital. Often he sees a case so seldom, and so short a time that his history of the disease must be imperfect. For a like reason he is very slow to try a new remedy. His work naturally drops into routine. In this malarious region, for example, in a large majority of cases he will give quinine, even though he might not get clear indications of malarial poisoning. What is the result of this line of work?

Years ago, in the clear air of New England, if a patient was found suffering with pneumonia in its earlier stage, his veins were opened and his chance for recovery was good. With the tide of emigration into this State the disciples of Æsculapius came also. Here too pneumonia was found. Of the diagnosis there was no doubt, *ergo* venesection was practiced, but the more blood was extracted the more surely did the patient die. In the one case there was the sthenic type, and by diminishing the amount of blood pressure, the infiltration of lung tissue was diminished, there was less to be absorbed or to break down, and the patient's chances for recovery were better. In the other instance the system had already been depleted by malaria and exposure. In such a case it were clearly better to do nothing at all than to diminish what little strength the patient had left. As a consequence the regular practitioner, relying more upon his former experience with the disease in question than upon his careful study of the case before him, saw his patients laid away for their final rest, while his neighbor was rich in giving directions to "take a teaspoonful out of each glass alternately an hour apart."

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In that humorous historic poem found in "Percy's Reliques," upon "King John and the Abbot of Canterbury," the Abbot's shepherd cheers his master by the question:

* * * * "Did you never heare yet, That a fool he may learne a wisse man witt?" We are also reminded that Sir Walter Scott once said that if after a half hour's conversation with any man, no matter how ignorant, he found that he had learned nothing, he began to suspect that he himself was the greater fool of the two. As scientists we have no right to cast aside and condemn as valueless any system until we have thoroughly examined it and extracted all that has worth.

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A scientist's duty is not done when he carefully collects the ideas and observations of others. He should endeavor to discover new truths. So one of our duties as medical practitioners is to widen the foundation upon which others are to build the future. Our common title indicates this, and it is a very objectionable feature of our American educational scheme that the term "doctor" is here so common and so meaningless. Legally, the man who has registered in our own county as having received his degree after studying twelve weeks in a Chicago homœopathic school has just as much right to be called "doctor" or "teacher" as the venerable president of our American Medical Association, or that surgeon from the City of Brotherly Love who has been honored in old Oxford with the degree of D.C.L. The degree M.D. here gives one little, or no idea of the knowledge which the bearer thereof possesses. It tells nothing of his social or moral standard. It behooves us then, as members of this society, so to conduct ourselves as to raise the professional standing in this community.

This is now the only active medical society in this region of country. To this society every honest physician within its bounds should belong. It ought to be a college of teachers who will exert an influence for good over the whole State. Do you ask "How is this to be accomplished?

In the first place, the Association ought to use every means in its power to uphold and enforce all State and local sanitary laws. It is a well-recognized fact, for example, that the recent law regulating practice in this State is a very weak and defective piece of work. It is a law, however, and every member ought to be a committee of one to see that it is not broken. We should be thankful for small favors, and regard this as but an opening wedge.

Secondly. As a society we ought to have a good professional museum and library for reference. If we are going to allow ourselves to depend upon what we have learned in the past with what little we may pick up, we shall not need a society library. But how many of us have such a large supply of medical literature that we could not soon exhaust it in studying any subject?

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The social gathering is a highly desirable or important feature of our meetings; but for that alone the majority of us cannot afford to give up all other work. Every person who has a privilege has also a duty. There are some men who are perfectly able to work who allow themselves to live at others' expense. There are also in some societies drones, who come regularly to take all they can get of the fruit of other men's work, but never condescend to collect the golden nectar for the common store. In some medcal societies, too, there are those who come around when it is convenient, discuss in an off-hand manner the subject under consideration, and perhaps they relate the symptoms of some case under their observation. But the duties of the members of this society do not end there. We ought to have not less than one good, thorough, scientific article read at each meeting. Am I wrong in saying that any man or woman who does not present such a paper as often as once in three years, is not worthy of being a member? I think that is not too strong a statement. Nor ought it to be left to the Secretary to find those to write such articles, especially since some refuse to prepare them when requested. It may be objected that the busy practitioner cannot find the time. Read Samuel Smilie's "Self Help," or Dr. John Brown's "Spare Hours." I remember that when I was in college one or two of the professors were frequently absent when their turn came to lecture. They always had this same excuse of professional business. It was a note-

worthy fact, however, that those who had the largest practice were the most sure to fill their hours.

Would it not elevate the standard of the society to require that every person should read before the Association a paper showing original investigation in some line of professional work before he should be admitted to membership.

What kind of paper do you want? We want them short and clear. Do not repeat in order to make the article longer. Do not try to cover too large a field. Let the article consist of a general review of the subject, followed by a more minute examination of some particular portion, with personal notes, if possible. A compilation and analysis of the thoughts and observations of others is better than nothing at all; but original investigations are the most needed. Distinguish clearly between fact and theory. Such a paper would not only be profitable to the whole society, but it would benefit its writer far more.

As a society we ought to make some original investigations. Take diphtheria one year and require each member to note down and report every case under his observation, telling age, exposure, both as to time and kind, duration of disease, treatment and result; water used; house clean; condition of cellar? The next year we might take pneumonia In such work it would be better to work with the committee of the American Medical Association in accordance with the report of the JOURNAL of August 25.

Our highest duty and privilege is not to deal out. physic, but to preserve the health of the community in which we live. This we must do as public teachers. At the last meeting of the American Medical Association it was recommended that each county society establish a school for nurses. Said school to be conducted as best might suit the circumstances, but probably on the lecture plan. Do we not need such a school here? And would we not be personally benefited?

NOTES ON TRACHEOTOMY, WITH CASES.

BY. W. H. MYER, M.D., FT. WAYNE, IND.

[Read in the Tri-State Medical Society, September, 1883.]

"It is not new facts that avail, but the heat to dissolve everybody's facts."—Emerson.

FOREIGN BODIES IN THE AIR PASSAGES.

I will not discuss the nature of the bodies introduced, how introduced, nor the somptoms developed by their presence; but the prognosis, and that only so far as it refers to the effects.

Of the operation itself I have only this to say: It should not exist—at any rate in the professional mind—as a *dernier resort*, for this would delay the surgical treatment, and the prognosis would be accordingly extremely grave, believing with Trousseau that "there is an imperative duty imposed upon the practitioner of performing tracheotomy as obligatory as tying the carotid artery when that vessel has been wounded, although death quite as often as recovery follows the operation."

I will further urge the propriety of *early* operation in all cases of tracheal obstruction, whether depending upon the presence of foreign bodies or obstruction from disease, differing, as I am well aware, from Dr. Wiest, who recently published an extremely interesting paper on this subject. In it he enunciates the following propositions:

1. "The presence simply of a foreign body in the larynx, trachea or bronchi does not make bronchotomy necessary."

2. "While a foreign body causes no dangerous symptoms, bronchotomy should not be performed."

These inferences were based upon 937 cases; of these 599 were not operated upon, 76.79 per cent. recovered and 23.20 per cent. died. Bronchotomy was performed in 338 cases; 72.48 per cent. recovered and 27.42 per cent. died, leaving in favor of non-interference 4.31 per cent. The fallacy of the argument is apparent when the author attempts to determine in what cases bronchotomy should be performed. This difference furnishes the solution to the results in the tables, and vitiates their value in the light in which the author presented them; for it is evident all the *difficult* cases would be included in the list operated upon, and the less difficult, where spontaneous expulsion took place and caused but little disturbance, these would be found in the class where nature effected the cure.

These tables establish the following conclusions: :

1. When foreign bodies were easily expelled—for instance seeds—recoveries took place in a larger per cent. than in the cases subjected to bronchotomy.

2. Only those where spontaneous expulsion had *not* taken place, and the symptoms were urgent—*the bad cases*—those threatened with asphyxia, inflammation and its products, were subjected to bronchotomy.

"Modern medical literature teems with statistics as to the results of tracheotomies. Their study only establishes the conclusion that the operation must be made with reference to the individual case in question, rather than with regard to the proportionate number of recoveries." The above is the language of one of our most enlightened specialists. While I will not attempt to deny the value of statistics, when properly presented, yet in medicine, we know the plainest rules of philosophical investigation have been disregarded. Things have been associated having no necessary relation, and conclusions have been drawn that had but an indifferent foundation in fact. Statistics imply something more than a process in arithmetic. They should be a profound philosophical analysis of materials carefully collected, with an enlightened confidence in their fitness for the purpose in question.

Without the proper regard for the principles here enunciated, they have been singularly barren of results. When the historian, the chemist and the naturalist require unexceptional authority for the statistical facts, and do not hesitate to subject them to a rigid scrutiny, only then do they become of any value. They must be applied only to incidents and events that have an objective existence, and just so far as

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[1] Troeltsch, Lehrbuch, p. 413, seg.

[2] "Cases of Fatal Otorrhœa," *Boston Med. and Surg. Jour.*, Nov 30.

they have a subjective relation to the mind, in that degree are they incapable of being statistically expressed, and are mere matters of opinion. The above statements are made in the presence of a complete knowledge of the labors of Zuitlet, the controversy of Sir J. Y. Simpson and Charles D. Meigs, and the publications of the Statistical Society of London.

In reply to the second proposition: "While a foreign body causes no dangerous symptoms, bronchotomy should not be performed," I have only this to say: I believe the prognosis to be materially influenced by the period of sojourn of the foreign body. In delay we incur the hazard of:

Asphyxia.
Chronic inflammation of the larynx and trachea.
Chronic phthisis.
Pulmonary abscess.
Bronchitis, with or without hemoptysis.
Acute phthisis, and even apoplexy.

Furthermore, his proposition is not sustained by the surgical profession.

Sir Benjamin Brodie, speaking of a foreign body remaining in the air passages, says: "The records of surgery furnish abundant evidence that under such circumstances diseases of the lungs, sooner or later, are induced, and the death of the patient invariably ensues."

In the Principles and Practice of Surgery, by Holmes, speaking of treatment, he uses the following language: "When the diagnosis of a foreign body has been made, the surgeon should allow *no delay* in removing it at once."

Prof. S. D. Gross writes as follows: "Having satisfied himself that the foreign body is in the air passages the sooner the surgeon opens the wind pipe the better, for the want of this precaution I have known a number of children lost in the vain hope that extrusion might occur spontaneously." These are the expressed opinions of Morrell McKenzie, Profs. Spence, Chelius, Hamilton, and Pancoast. James T. West, Senior Surgeon Queen's Hospital, Birmingham, thus forcibly pronouncing his views: "The fact that a foreign body does exist in the air passages, no matter whether it causes urgent symptoms or not, calls imperatively for surgical interference for its removal, and the surgeon who defers the operation does so at the risk of leaving the patient in danger of sudden death."

That the non-interference doctrine is not sustained by the medical professlon, I will quote from a lecture delivered by Dr. Johnson, of King's College, London: "A foreign body in the larynx is a continual source of danger; therefore, it should be removed as speedily as possihle, even though the present symptoms may not appear alarming nor very distressing." Sir Thomas Watson says: "When we know that a solid body has been entrapped in the air tubes our business is plain. There is no room in my opinion for hesitation. We must let the substance out through an artificial wicket."

There is no security except in the early performance of tracheotomy. The above opinions are fully sustained by Stokes, Neimeyer, Meigs, Bristow and Trousseau. Among the cases which have come under my observation with foreign bodies in the air passages four children perished without tracheotomy, and in these cases death did occur, after a lapse of four or five days, it was almost instantaneous. You will infer from the foregoing that I am not a believer in spontaneity. In Germany therapentics have been signalized as something hardly better than Nihilism, and the practice of physic not much more than a meditation on death. Let it not be said that we as surgeons will stand idly by aud wait for nature to kill or cure our patient when a foreign body is in the air passages. For myself I can boldly affirm that I live to heal; that there are now a few persons in the world who, but for me, would have becn amongst the dead, and this remark will apply to every educated practitioner.

This doctrine of spontaneity has its American headquarters in the State of Massachusetts and its capital is Boston, where nature trusting to homœopathy and its kindred delusions have led to well pronounced skepticism in the healing art. If nature is a curer, then are we impostors. Nature pursues her ways with men, regardless of their infirmities. The living man left to his course with reason to guide him, is neither protected from disease nor cured of it when assailed; for him no special force or power is evoked in case of accident. To trust to so called *vis medicatrix naturæ* and neglect or omit scientific methods of cure is to forsake the path of duty and leave to chance that which falls within the domain of reason. Does nature or art cure ovarian dropsy or cataract, or if she *sometimes* cures spontaneously an aneurism or hernia, or a wound? Do we trust to her unaided efforts in any such cases? Neither can we trust to nature to spontaneously expel the foreign body, its exit being opposed by the narrowing of the glottis, which takes place during expiration, especially when this is augmented by the spasm and cough which its presence excites.

"To say nature cures disease is a bad expression if it create in our minds a metaphysical conception, as if there were some personal animus controlling the operation."—Sir William Gull.

Efforts of nature are regarded with watchfulness and doubt. Often must we agree with Professor Houghton, of Dublin, who, when told that the evacuations of cholera are due to an effort of nature to cure the disease, said: "I will tell you what nature wants. She wants to put the man in his coffin, and that's what she succeeds in doing for the most part."

Not long since I read of a learned professor who was desirous to illustrate to his class the curative effects of nature in the disease known as pericarditis. He commenced his learned proof of natural cure by taking the heart of the cured man out of a pickle jar, and by describing from the disorganized specimen how beautifully the heart, by the exudation of lymph, had become adherent everywhere to the pericardial surface, and thus prohibited the pericardium from being filled by water.

In one case only, observed by me was the foreign body expelled spontaneously after remaining four months in the respiratory passages. The sequellæ

were never entirely recovered from, so that my own experience agrees with McLeod's, that "hope of spontaneous expulsion is not great, and may, by its delusive promise, fatally delay operative proceedings."

In 1879 a child aged 4 years was placed under my care for treatment. The history was briefly as follows: Four days previous to the visit a grain of corn passed into the trachea. Tracheotomy was decided upon, but was unavailing, for the grain of corn could not be dislodged by the use of forceps nor by the expulsive effort of the lungs. The autopsy revealed the true condition: Hepatization of a portion of the lung, and the grain of corn firmly impacted in the bronchus. Its enlargement was the result of the imbibition of fluids. Who can doubt the child perished the victim of delay.

In 1872 a boy, æt. 6, was brought to the St. Joseph Hospital in Fort Wayne, with a foreign body in the trachea; no urgent symptoms were present. Twenty-four hours had elapsed since the intrusion. Upon opening the trachea the grain of corn escaped through the opening made, and a rapid recovery was the result.

In the few cases of diphtheritic croup operated upon by me, the result was uniformly fatal; due entirely to the opposition to tracheotomy in the earlier stages, thus depriving them of the only chance of being saved. By this time, you all understand that I am a decided advocate for early interference in all cases of obstruction in the air passages, whether it be a foreign body, croupal or diphtheritic exudation; chronic laryngitis, syphilitic or tubercular; or in paralysis of the arytenoid cartilages.

To illustrate the effect of tracheotomy in laryngeal disease, I will present two cases of perhaps more than ordinary interest.

On the 28th of June, 1883, I was hastily summoned to see Wm. Moyer, the messenger announcing the probability of the death of the patient "ere we could arrive the point proposed." Upon my arrival, I found him insensible; respiration feeble and gasping; surface cold and clammy; pulse almost imperceptible. I was impressed that not one moment was to be lost; that promptness and rapidity were both required, so extreme was the urgency.

With the knife, I made a long incision, extending from the cricoid cartilage almost to the epi-sternal notch. The structures overlying the trachea being divided by a few strokes of the knife, the hæmorrhage was venous; ligation of blood-vessels was out of the question, for the delay would have caused the death of the patient.

Upon reaching the trachea, I did not wait to use the tenaculum or short-tooth forceps, as recommended, but flattened it by pressure with the left index-finger, and thrust the knife boldly into it, dividing three rings. Separating the edges with forceps, the tube was quickly placed in proper position by Dr. Devilbiss. No immediate improvement occurred. The insensibility gradually passed off in three hours.

I found him almost fatally asphyxiated by the carbonized blood, acting upon the exhausted nerve centers as a powerful sedative, failing to arouse the healthy gasping respiration which usually takes place in a less degree of carbonization. He had thus become greatly narcotized, days before my visit.

In this case, then, we witnessed the most serious features of bi-lateral paralysis of the abductors, producing that glottis closure, which gave rise to the peculiar dyspnœa from which he had been suffering long anterior, but in a less degree, than at the time when surgical treatment was necessary to save his life.

It is probable now in this case that the abductor muscles have undergone degenerative change, owing to disease, implicating one or both recurrent nerves, and that the disease is of a specific nature.

On the 1st of July, 1883, I was called in consultation to visit Moses Millman. I found him suffering with deep suppuration of the cellular tissue of the neck, the swelling extending from the sternum to the chin. His illness was of fourteen days duration. I was enabled with the aspirator to make out the diagnosis. The purulent collection was in the immediate vicinity of the trachea. I carried an incision down to this point extending from the cricoid cartilage to the epi-sternal notch. A large amount of dark, highly offensive, fœtid pus made its escape. After the wound was thoroughly washed out, and the pus had made its escape, spasm of the glottis ensued from the presence of pus that had made its way into the pharnyx and the air passages; respiration ceased, as did also pulsations of the heart, and apparently our patient was dead. I opened the trachea, and kept up artificial respiration until at last our patient rallied; after three hours insensibility passed off. He is now almost restored to health after a tedious convalesence. The wound in the trachea was allowed to close up and no tube inserted.

I will not speak of the pathology of cellulitis, or point out its distinctive clinical characteristics as distinguished from erysipelas or diffuse abscess, but will remark that the treatment of cellulitis of the neck is not satisfactory in its results. Bilroth reports no recovery. Jordan was unsuccesstul. Bickersterh has advised an incision on the middle line down to the trachea. In the case just reported the incision was made *into* the trachea, partially owing to the exigency, I admit, and I am able to report favorably.

I would recommend tracheotomy also in chronic thickening of the mucous lining, and in ulceration from the effect of tertiary syphilis or tubercular deposit in the mucous membrane. For if allowed to progress they usually terminate in œdema of the glottis, and cause death, in cases such as above described. Spence strongly urges the operation, informing us that the improvement of the general health is often very marked, and that with a large experience in such cases, the results have been almost uniformly successful.

We may now briefly consider the treatment of chronic laryngeal disease by surgical procedure after medical measures have failed.

In the thesis maintained by Professor Krishaber, of Paris, in the Laryngological Congress at Milan, he says he has employed against laryngeal phthisis all known topical remedies, nitrate of silver, sulphate of

zinc, iodine, chromic acid, scarifications and they have all proved inefficatious. He now uses local applications of narcotic sedatives only. He maintained that the local therapeutical means are without action, and concludes: "We require something else and something better."

Now let me ask is not tracheotomy the remedy? I believe in the future the attention of the profession will be profoundly directed to surgery, instead of to medicine for relief in those cases. The intimate relation between laryngeal disease and pulmonary disease can no longer be doubted; nor the fact that the exciting cause of pneumonia may be the result of blood poisoning through the absorption of morbid products from ulcers in the lyrynx, as when after syphilitic ulceration the lungs are involved and also when laryngeal phthisis is followed by tubercular infiltration of the lungs. These are points worthy the best attention of the physician and surgeon.

The sequence of events are often as follows: The laryngeal disease may be the result of a neglected cold, sore throat and hoarseness remaining for months; cough and mucous expectoration; pain and difficult deglutition. In this early stage of the laryngeal affection there is no evidence of pulmonary disease; the chest movements and the percussion sounds are normal, yet in a large proportion of these cases the physical signs of tubercular deposits are discovered in due time, and is it not the result of pre-existing laryngeal affection? It is not improbable that morbid infecting materials from the ulcers in the larynx may be carried by inspiration into the interior of the lungs, or that the lymphatics may become the poison route? If this theory be true, and I believe it is, may not the question of tracheotomy be entertained even in the earlier stages before the dyspnœa imperatively demands it. This would secure absolute and complete rest to the larynx from the movements of phonation and respiration, and freedom from air currents. The rest thus secured would favor the resolution of the inflammatory process and prevent the absorption of septic materials.

IS CONSUMPTION AN INFECTIOUS DISEASE?

BY U. P. STAIR, M.D., OF BLACK EARTH, WIS.

I wish briefly to offer a few observations upon the subject of the nature and origin of tuberculosis.

At the recent meeting of the State Medical Society of Wisconsin, held at Milwaukee, September 4, 5 and 6, a resolution was adopted declaring in substance that we now *know* consumption to be an infectious disease, and that the authority of the State Board of Health should be sought to the end that persons afflicted should be "separated from intimate association with the well in our public institutions." It would seem to me that the passing of this resolution as based upon what we actually know concerning the origin and nature of consumption, is wholly premature. We certainly do *not know* that consumption is an infectious disease. On the contrary, the vast majority of the profession, from actual clinical experience as we believe, are pretty well satisfied that it is not. We do not know positively, that it is a disease capable of being transmitted by heredity, but we believe it is and to say that the profession has, all these years been making a great and fatal mistake in regarding tuberculosis as a hereditary malady, hopelessly deathward in its tendency, and in which there was little to be done but to palliate severe symptoms, is to make a very grave charge indeed. We learn from a report presented to the same society a year ago, by Dr. Senn, of Milwaukee, that this author believes that tuberculosis is both a parasitic and hereditary disease; that the primary condition is inherited and the active disease parasitic.

As to the primary condition of tuberculosis being a result of heredity we believe with Dr. Senn that there can be but little question. The only doubt that remains is as to the origin of the active phenomena manifested. Do these arise from parasitic infection? The affirmative answers given to this question recently no doubt rest very largely upon the late investigations instituted by Dr. Koch, of Berlin. But are we to accept the conclusions of this author as final upon this all-important subject. I think not. Already dissenting voices are heard of such authority that they must receive due attention. Prof. Formad, of the University of Pennsylvania, in a lecture reported in the *Philadelphia Medical Times*, November 18, 1882, declares most emphatically for the non-parasitic origin of tuberculosis. He there says that he pursued essentially the same method of staining in its recent improvements as described by Dr. Koch, and after four years of careful experiment upon animals he arrives at the following conclusions briefly stated thus:

The presence of bacilli is merely accidental wherever found in tuberculosis deposits. "The tuberculous tissue seems to serve merely as a nidus for the growth of the bacillus" and again he says:

"An analysis of Dr. Koch's experiments shows that he has not proved the parasitic nature of phthisis or that there exists a special bacillus tuberculosis, and that the infectiousness of tubercular disease is still *sub judice*."

Prof. Formad regards the primary condition of scrofula and tuberculosis as being one and the same, and that this condition consists in an abnormal "narrowness of the lymph spaces and their partial obliteration by cellular elements," and then he adds: "The natural history of tuberculosis just narrated, is surely against the existence of a special poison, such as now offered by Dr. Koch;" and again: "Koch has discovered that tubercule tissue is always infected by bacilli, and this is correct; but this tubercle tissue is not created on account of, or caused by, the bacilli. These organisms invade the tissue in question solely because it is a culture medium favoring their predominant development."

Then in respect to the special character of the parasite, Prof. Formad further says: "Koch further claims that the bacillus tuberculosis differs from other bacilli morphologically, and in its behavior to staining fluids. We can not confirm this. My assistant, Mr. Bodamer and myself, after prolonged study with instruments as good as those of Koch, and after using

all known methods of staining, have failed so far to see any special features in the bacillus in question which would make it distinct from other bacilli."

It would transcend the limits assigned to this article too far to pursue the interesting investigations of Prof. Formad further, but, it seems to me, enough has been shown to cast serious doubts upon the pathological and microscopical evidence in favor of the parasitic origin of consumption, and if this evidence fails, what is to be said of that afforded by clinical observation. I am well aware that the doctrine is not new. More than fifteen years ago Dr. DeCosta published an article in the *American Journal of the Medical Sciences* suggesting the possibility of the contagiousness of consumption and giving several illustrative cases which seemed to lead to this view. My attention having been thus called to the subject, by careful observation I endeavored to satisfy myself as to whether the claim could possibly be sustained by clinical facts. But thus far I don't remember a single instance where infection, pure and simple, and outside of all hereditary influence, could have borne any part whatever in the origin of this disease, or wherein the disease was produced by infection alone, without the accompanying hereditary taint. I would not venture thus to give the results of my own limited experience, were it not that I feel assured that it is in accord with that of the vast body of my professional brethren. It seems to me, in the face of these considerations, it would not be well for the profession to rush into the grave mistake of asking for legislative authority upon the practical application of a mere theory which a little time and a more extended inquiry may change very materially or dissipate altogether, leaving behind, as a result, humiliation enough, if not absolute hindrance to the advancement of medical science.

Besides, let me add, that to ostracise the unfortunate consumptive from the kindly care and social influence of friends and loved ones, for years it may be, as this doctrine demands, is a matter of very grave import, and should never be attempted for any cause whatever, short of a positive demonstration that justice and the safety of the well absolutely require it.

MEDICAL PROGRESS.

A CASE OF CHYLURIA IN WHICH CASEINE WAS DETECTED IN THE URINE.—The *Moniteur Scientific* for September contains the details of an interesting case of chyluria, by Dr. A. Livson, followed by a minute chemical study of the urine by M. E. Seger, pharmaceutist. The case was that of a woman, native of Normandy, and 27 years of age, unmarried. For some years she had suffered from cardiac troubles, severe neuralgia, shortness of breath and œdema of the legs, there existing insufficiency and disease of the mitral valves. Pulse weak and irregular. The menses formerly free and regular, became irregular, appearing every three months; flow in small quantity and very painful. Palpitation of abdomen showed apparently a body the size of an orange attached to the uterus. The kidneys sensitive to pressure over them and painful; urine red, depositing an abundant red substance, and varying in quantity between 800 and 1200 grammes. These symptoms gradually became aggravated, when suddenly after a violent crisis resembling that of nephritic colic, the patient declared that her abscess had opened and showed her chamber pot containing urine resembling a mixture of bouillon and milk. Microscopical examination determined the presence of fat globules without pus or blood. Chemical examination by heat and nitric acid produced an albuminous precipitate which was so peculiar in its characteristics as to cause M. Seger to submit it to a careful chemical analysis. From this time on the fatty matter continued to be discharged with pain in the kidneys and abdomen, but without any apparent effect on the patient's adipose tissue —milk being almost the only nourishment. In the course of the analysis occasionally a minute clot of the size of a pin's head was found, but never blood in solution, and no filaria were present. Examination of the venous blood showed nothing unusual. To sum up: In lieu of albumen Mr. Seger found caseine in the urine, in which were also present all the elements of milk except sugar. Neither fat nor caseine was present in the blood. For two years the disease did not increase and the general condition was satisfactory. The treatment during that time consisted simply of a milk diet, bleeding at the time of the crisis and the use of potassium bromide.

The record of the case is followed by a careful analysis of the urine showing that the quantity passed in twenty-four hours was 1400 to 1600 cub. centim., the density 1.020, less urea than normal; the quantity of fat eliminated in twenty-four hours is very variable, being between 1 gr. 07 and 7 gr. 54. The quantity of uro-caseine in solution in twenty-four hours varying from 0 gr. 46 to 1 gr. 16.

The term uro-caseine is used from a certain reserve in deciding the question of identity between this substance and the caseine of milk which it resembles so very intimately.

BROMIDE OF POTASSIUM IN THE TREATMENT OF DIABETES.—In the month of August of last year M. Felizet, Hospital Surgeon, presented to the Paris Academy of Medicine, a memoir which caused considerable stir, upon the treatment of diabetis by bromide of potassium. The results as announced were marvelous. Two very marked cases of diabetes were relieved in a few weeks or even in a few days. The Academy appointed M. Dujardin-Beaumetz to experiment thoroughly with the method of M. Felizet. His report has now been presented and is favorable to the method. He accepts fully the numerous successful cases as due to the bromide; 15 cases observed by M. Felizet in his memoir; 14 cases after reading his paper; a number of cases noted by MM. Herard and Dreyfus-Brisac, and finally those of M. Dujardin-Beaumetz himself. The bromide of potassium has not only relieved temporary cases of diabetes which might in time be relieved of themselves, but has equally relieved very decided and inveterate cases.

The reporter found, however, that it was difficult to judge accurately of the value of the bromide as M. Felizet associated with this treatment as much of gymnastic exercise as possible, as well as the use of other agents, as arsenic, iron and chinchona, without paying much attention to the diet. He found that this drug employed habitually to the extent of 4 grammes per day, produced an intellectual depression and a decided prostration of the general forces, which conditions M. Felizet affirms that he effectually overcomes by his gymnastic exercises.

In the discussion which followed, M. Ricord without reserve gave his approval of the treatment. He had treated successfully by its means 8 or 10 cases during the past year. The objectionable symptoms attributed to the bromine could also be accredited to diabetes, which also diminishes the force and produces cutaneous emissions, and the best way of economizing the forces of the patient is to cause as soon as possible a disappearance of the sugar from the urine. Dr. A. Chevallineau who gives us this account in *La France Médicale*, August 30, adds to the preceding his own experience in two cases of temporary diabetes, where the sugar disappeared in one after five days; treatment suspended; return of the sugar; treatment renewed for fifteen days with entire relief; in the other it entirely disappeared in fifteen days. He also gives a case of diabetes of ten years standing, which had been relieved by other treatment so far as to reduce the amount of sugar from 35 grammes to 3 or 4 grammes per liter; a treatment of five weeks caused its entire disappearance. In a case of cataract the urine was entirely relieved of its sugar in about three months, but the cataract was not influenced by it, except that only one eye was affected. On the other hand he cites a case by Dr. Pasteau of a man 65 years of age, affected with double cataract, and passing 175 grammes of sugar per day, upon whom the bromide, continued for three months, produced not the slightest influence.

Anal Tumor of an Erectile Character.—M. Richet in his hospital practice at the Hotel Dieu Paris gives a description (*Gazette Hôpitaux*, Aug. 30) of a case occurring in a young man, who, at 17 years of age, after several days of obstinate constipation, followed by an exersive discharge, found a tumor present in the anal region. From that time each stool was followed by its protrusion, accompanied by a little blood. In the last eighteen months it commenced to protrude independent of the stools, particularly after walking, and to increase considerably in size. At present the least effort causes its protrusion and necessitates an attempt at its reduction. Last year a case somewhat analagous presented itself, but in an older man, and due to a relaxation of the muscular fibers of the sphincter, rendering it unable to retain the hæmorrhoidal tumor. But here there is no relaxation; the sphincter contracts very perceptibly. Upon asking the patient to make a straining effort while inspecting the parts, a little bluish swelling appears at the orifice of the anus, which gradually increases in size, the external projection of which becomes more and more pronounced like an erectile tumor, and the sphincter yields by degrees until the whole tumor passes out. It is as large as a hen's egg, bluish in color, projects between the nates, and shows, upon its mucus surface, a series of tortuous veins which, if ruptured, would give rise to a marked hæmorrhage, being, in fact, an aneurismal venous tumor. Here we have neither a discharge of blood or mucus. It does not belong to what is called the red or the white hæmorrhoidal tumors. It forms a third group. Fortunately the sphincter does not contract upon it or the result might be that of total or partial sphacelus, gangrene, etc. M. Richet proposes to remove it by means of the cauterizing ecraseur process.

On the Heating of Surgical Instruments.—Prof. Leon Tripier (*Lyon Medical*, Aug. 26) gives us his method of preparing surgical instruments by heat for operation. He asserts that instruments, as a rule, are not subjected to a proper degree of heat. Cutting instruments, as an example, are not submitted to the flame and special hæmostatic processes are passed through the flame in an irregular and insufficient manner. He began his experiments with a gas chafing dish, a porcelain capsule filled with oil, in which he placed a bistourie. Between 90° and 100° C. the cement gave way; between 125° and 130° the pins which held the blade and handle together fell out into the vessel. The cutting edge of the blade was found to be as good as ever. Satisfied with this experiment Prof. Tripier has had constructed a brass box 40 centim. long, 27 high and 20 broad, intended to receive oil which can be brought to a given temperature, and in which can be placed the necessary surgical instruments. Under the bath is a burner, supplied with gas and furnished with an Arsonal regulator and a tube *â sauterelle*. The box is divided into seven compartments, differing in size according to the instruments which they are intended to receive. These compartments communicate with each other by means of a double bottom, the upper part of which is pierced with holes so as to allow of an equalizing of heat throughout the mass of oil. The bottom of the compartments intended for saws and amputating knives is provided with layers of cork to prevent the blunting of points and edges against the metalic surface. For small instruments like focreps, bistouries and scissors, he constructs little baskets plaited out of annealed iron wire, which can be placed in the oil. The temperature should be 120° to 130°, to reach which requires about three quarters of an hour. The instruments should remain at least ten minutes, then be placed in the large basin containg a solution of phenic acid 50 to 1,000, which has been heated to 70° or 80°. All instruments used in general operations should receive this bath, and then be placed in the basin for use during the operation. The question of handles becomes important here, and Prof. Tripier first thought of using metal handles, but found them seriously inconvenient, and recommends the English mode of prolonging the metal into handles formed of two lateral portions fastened with pins.

RELIEF OF FŒTED SWEATING FEET BY SUBNITRATE OF BISMUTH.—M. Vieusse (*Gazette Hebdomadaire*) recommends highly the use of this drug in this affection. The fœted sweat follows different forms of affections of the feet, sometimes the derm is naked and exposed from the maceration of the epidermis, and is the seat of severe pain. At others the skin does not seem to be altered at all, while the odor from the sweat is very marked. In either form frictions, with subintrate of bismuth, have been followed with success, by using twenty or thirty grammes of the drug, being careful to rub it well into the interdigital spaces. In most cases its daily use for fifteen days produces perfect relief. The epidermis becomes firmer, and loses its whitish appearance, is less wrinkled and adheres to the subjacent tissue. The secretion diminishes.

SUBCUTANEOUS INJECTIONS OF AMMONIATED MERCURY PEPTONE IN THE TREATMENT OF SYPHILIS.—The 18th volume, 2d series, just received, of the *Sociète Médicale des Hôpitaux de Paris*, contains a memoir on this subject, by Dr. L. Martineau, in which he details one hundred and eighty cases of syphilis submitted with benefit to this treatment. The use of subcutaneous injections has been employed with greater or less success since 1854, when it was first made use of by Prof. Scarenzio in Italy. Different formulæ were used at various times to prevent pain, abcesses and scars, until Staub, in 1872, used a solution containing the white of egg, with chlorides, forming what he termed the "chloro-albuminate of mercury," as being capable of being absorbed. Disagreeable accidents still ensuing, this mode of treatment fell into disuse in the treatment of syphilis. Bamberger prepared what he called the peptonate of mercury, which was not followed in its use by abcesses or eschars, but which produced pain, nodosities and more or less persistent numbness. Dr. Martineau obtained the services of the pharmaceutist, M. Delpech, who used the dry peptone of M. Catillon, which is exceptionally pure, and made the following combinations: Bichloride of mercury, 18 grammes; peptone, 15 gms.; chloride of amonium, 9 gms.; 1 gramme representing 0 25 centigr. of corrosive sublimate. For injection, ammoniated peptone, 0 gr. 40 centigr.; distilled water, 30 grammes. This solution would give 4 milligrammes of the sublimate to an ordinary hypodermic syringe containing 1 gm., 20 centigr., and will keep well for several days.

Dr. Martineau gradually increased his doses subcutaneously until he reached 5 milligrammes, which he found to be well borne; that the pain was not persistent. A few of his cases complained of its lasting for a day; but in most of them it only continued for an hour in the first injections, afterwards the pain was unimportant; there was no local irritation provided the injection was subcutaneous; that 4 milligramme doses were not followed by any evidences of salivation; no mercurial stomatitis or gastro-intestinal disturbance, and that given in this way the effect was more prompt and rapid than when given by the mouth.

Later in his experiments Dr. Martineau used an injection, which was prepared for him by M. Delpech, as follows:

Peptone, in powder, 9 grammes; chloride of ammonium, 9 grammes; corrosive sublimate, 6 grammes. This was dissolved in glycerine, 72 gm.; distilled water, 24 gm., of which 5 grammes of filtered contained exactly 0.25 centigr. of the sublimate, which in solution with 25 grammes of distilled water, gave to a syringe holding 1 gramme 20., exactly 10 milligrammes of the sublimate, which dose Dr. Martineau used to advantage, but he considers 5 milligrammes as the proper dose. He recommends further that the glycerine solution be prepared only in small quantities and when required for use.

M. Armezzano, by a careful chemical process, which it is not necessary to detail, obtained from the urine of the patients submitted to this treatment the red crystals of the biniodide of mercury, showing that the mercury introduced by injections is eliminated within the first ten days.

Dr. Martineau further cites one case occuring in the practice of another physician, where a patient submitted for six days to internal mercurial treatment became so freely salivated as to prevent all continuance of treatment. These injections were substituted of the strength of 3 to 5 milligr., and to the number of 45, without inducing salivation. The cases cited show a rapid and energetic influence upon a great variety of syphilitic manifestations, as papillary, papulo-hypertrophic, papulo-erosives of the vulva, anus, vagina, uterus, mouth, tongue, and tonsils; cutaneous affections as erythematous, papillary, papulo-squamus, and maculæ; lenticulæ, ulcerated, and tubercular ulcer.

By slight modifications this preparation of mercury can also be used internally. In a group comprising several cases, Dr. Martineau used the following with benefit:

Peptone mercuric ammonias, 1 gm.; glycerine, 50 gm.; distilled water, 200 gm., of which solution a coffeespoonful represented 5 milligr. He gave one to two spoonfuls a dose, mixed with water or milk, producing no nausea, no vomiting, and none of that metallic taste which persists sometimes for hours with other preparations. The urine examined in these last cases showed traces of mercury.

NEW BOOKS.

ON SOME POSTEPILEPTIC PHENOMENA.—In a paper read in the Section of Medicine, at the annual meeting of the British Medical Association, at Liverpool, August, 1883, Julius Althaus, M.D., M.R.C.P. LOND., Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park, makes the following introductory observations before describing a series of cases:

"I wish to draw attention to certain either acute or chronic alterations of the mental faculties which have fallen under my notice, as direct consequences of epileptic attacks. I shall purposely exclude, in discussing this matter, any cases in which epileptiform seizures took place in consequence of gross or-

ganic lesions, such as tumor of the brain, chronic inflammation of the membranes and the gray surface of that organ, blood poisoning of various kinds, and other diseases in which the convulsive paroxisms were only one symptom amongst many others; and I shall confine myself strictly to the consideration of those cases in which epilepsy occurred as a true neurosis, that still mysterious and unexplained functional disease of the gray matter of the brain, which is possibly owing to some kind of imperfect nutrition, but certainly not to any such structural alterations as would reveal themselves to our present means of research.

"The paper is based on an analysis of the cases of 250 epileptic patients which have been under my care, in private and hospital practice, during a period of six years. Amongst these cases there were 89, or 35.6 per cent., in which no perceptible temporary or permanent alteration in the mental condition, which could be ascribed to the epilepsy, was to be ascertained; while in 161 cases, or 64.4 per cent., such alterations did occur. Of the 89 cases which escaped mental deterioration, 61, or 68.5 per cent., were instances of nocturnal epilepsy; while 28, or 31.4 per cent., attacks took place in the daytime. All, however, which escaped, were cases of typical convulsive attacks: while, in all cases of loss of consciousness without convulsion, or *petit mal*, and epileptic vertigo or automatism, a more or less permanent mental alteration was induced. Amongst the 161 cases which were followed by mind-affection, there were:

123 cases (or 76.5 per cent.) of typical convulsive attacks;

26 cases (or 16.1 per cent.) of *petit mal;* and

12 cases (or 7.4 per cent.) of epileptic automatism.

"Amongst these patients there were 91 males, or 56.5 per cent., and 70 females, or 43.5 per cent. The ages of the whole series varied from 5 to 62, and when these were distributed over decades, it appeared that the decade from 5 to 15 was at the bottom of the list with 10.5 per cent.; while that between 15 and 25 headed the list with 24 per cent., the other decades being very nearly even, with a medium of about 16 per cent. The hereditary influence was marked in 66 cases, or 40.9 per cent. The nature of other predisposing or exciting causes, as far as they could be ascertained, did not appear to have exerted any special influence, since they were much of the same kind as in those cases in which the mind was not affected. I will, in passing, remark that I have excluded from the present considerations those cases which were apparently owing to injury to the head, syphilis, and masturbation, as these are of a complex character.

The cases, therefore, which form the groundwork of this paper, are only such where epilepsy was the primary event, and where some mental disturbance was observed subsequently to, and as a direct consequence of, the attack. There are two forms of this disturbance, viz.: an acute one, where mental symptoms occur soon after attacks and disappear again after a certain time; and a chronic form, in which there is a gradual and permanent loss of mental power consequent upon attacks.

The characteristic feature of the acute form of postepileptic mental affection is its periodicity. Identical, or at least highly similar, symptoms are seen to occur year after year, and gradually become intensified, unless they be checked by active treatment. They do not always occur immediately after attacks, but occasionally a day or two afterward, and last a variable time, but rarely longer than a week. After such an attack is over, the patient has mostly no recollection whatever of what has occurred."—*British Medical Journal.*

THE COMPARATINE ADVANTAGES OF SCRAPING AND SCARIFICATION IN THE TREATMENT OF LUPUS VULGARIS.—In a paper read in the Section of Surgery, at the Annual Meeting of the British Medical Association in Liverpool, August, 1883, by Malcolm Morris, F.R.C.S.Ed., Surgeon to the Skin Department of St. Mary's Hospital, Mr. Morris speaks highly in favor of free erosion by means of a blunt spoon. He continues: "The plan I adopted was, with a few minor modifications, identical with that originated by Volkmann in 1870. With a large spoon, all scabs are thoroughly removed, and with them the great bulk of the superficial deposit; and after drying the surface, the minute nodules which are deeply lodged in pockets of the corium, are dug out with smaller and pointed scoops. The margins are also vigorously scraped. The spoon should be applied till the whole of the soft, friable lupus tissue has been removed, and only the firm resistance of the sound parts is met with. Though the greater portion of the disease may be removed at one operation, some of the smaller, deep-seated nodules which have escaped will reappear in the scar, and require subsequent treatment. After the healing of the wound produced by the operation, a scar with more or less loss of substance is left.

"The great advantage of this treatment is the rapidity with which a cure can be obtained; and if a large surface be affected, in a position in which a scar is of no consequence from its appearance, it is, on the whole, the best that can be recommended. On the face, and other exposed parts, the appearance of the cicatrix is a matter of some importance, and it is here that the other mode of operation, scarification, yields better results. I would here mention, that in lupus of the mucous membrane I have had the most satisfactory results from scraping.

The method of multiple punctures, as suggested by Veiel, of Cannstatt, in 1871, is effective but tedious in application, and I have preferred to practice linear scarification with a narrow, triangular-pointed knife, as used by Professor Vidal, of St. Louis Hospital, Paris. The little operation is performed by pressing the sharp point of the knife, which should be he held like a pen, on the sound skin at the edge of the lupus-growth, and quickly drawing it across the mass to the healthy skin on the opposite side. In its course it should penetrate the entire thickness of the morbid nodule, dividing at its base the fibrous bundles of the corium. Other incisions, parallel to to this, should be made as close as possible, and these should be crossed by others at right angles. The

bleeding, which is slight, is easily checked by a compress of cotton-wool, and the little cuts heal rapidly. After a week's interval, the operation should be repeated. Occasionally two or three operations are all that is needed, but more often it is necessary to repeat them several times. The scar left is smooth, supple, and usually distinguishable from the healthy skin only by its paler color, being little, if at all, depressed.

In the severer ulcerating forms of lupus, especially in lupus exedens, the one alluded to in the opening of the paper, scarification, to be of service, must be used more boldly. We have sometimes to plunge the whole blade of the knife into the mass for a depth of one-half to three-quarters of an inch, to incise it in all directions, leaving the part in a condition literally of mince-meat, but without removing any portion of the tissue. This plan, I can state from my own personal experience, is most effective, and fully merits the favorable recommendation of Vidal.

In comparing scraping and scarification, the former—though it has the advantage of rapidity—in the character of its scar is much inferior to the latter. Scraping is, after all, a destructive method, similar to, though milder than the older forms of treatment, as it mechanically removes the diseased material, whereas scarification is essentially conservative in its action. The incisions, by cutting off the blood-supply, modify the nutrition of the new growth, and lead to its atrophy with a minimum loss of substance. In addition, in the severe forms of lupus exedens, in which scraping fails, or even aggravates, scarification acts most rapidly and completely. A further, though minor advantage is that scraping, on account of the pain, requires an anæsthetic, which can be dispensed with in scarification.—*British Medical Journal.*

NEW YORK CODE CONTROVERSY.—In a recent number of the *Medical News* the editor finds the present status of the controversy in New York concerning the Code of Ethics as follows:

"The Code controversy in New York has now reached the stage in which argument has ceased, and the strength of the respective parties is being carefully computed prior to the appeal to the ballot in the New York County Society—the birthplace and stronghold of the New Code—on the 29th proximo, and in the State Society next February.

"A poll of the 1661 physicians whose names are in the New York City Medical Register shows that 764 adhere to the National Code, 404 are advocates of the New Code, and 54 of no code. The remainder are uncommitted. In the New York County Society, we are reliably informed, the advocates of the National Code are largely in the majority.

"The canvass of the State, which is still in progress, shows that there are 2,405 physicians who adhere to the National Code, 924 to the New Code, and that there are 215 who advocate having no code.

"These figures are extremely gratifying. They show that the profession of the State has been completely misrepresented in the State Society at its last two meetings, and they unerringly point to the speedy revocation of the New Code."

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, OCTOBER 13, 1883.

TRAINED NURSES.—It will be remembered by those present at the recent meeting of the American Medical Association in Cleveland, and such others as may have read the full record of proceedings contained in the first number of this journal, that Dr. S. D. Gross, of Philadelphia, offered, and the Association adopted, the followed preamble and resolution:

"WHEREAS, Good nursing is of paramount importance to the comfort of the sick and the restoration of their health, and

"WHEREAS, The subject is one which strongly addresses itself to the common sense and kindly sympathy of every intelligent member of society, therefore,

"*Resolved*, That this Association, fully recognizing the importance of the subject, respectfully recommend the establishment at every county town in our States and Territories, of schools or societies for the efficient training of nurses, male and female, by lectures and practical instruction, to be given by competent medical men, members, if possible, of county societies, either gratuitiously or at such reasonable rates as shall not debar the poor from availing themselves of their benefit."

This action of the Association, prompted by Dr. Gross, has attracted the attention and received the approval of several of the more influential medical journals, and is of sufficient importance to engage the attention of the profession generally. In several of our largest cities there are already regular training schools for nurses in connection with permanent hospitals, in which all the advantages are afforded for making accomplished and reliable nurses. But the benefits of such organized and thorough training schools, etc., and in the nature of things must be

limited to the larger cities. To secure the better training of nurses for the towns and country districts, where they are even more necessary than in the cities, on account of the longer time between the visits of the physician, Dr. Gross, in an article contained in the *Medical News* of September 15, says:

"To educate nurses for the rural districts and villages, all that is necessary is to establish a central office or bureau at every county town in each State and Territory, and to place it under the charge of its medical society, which should elect two, or at most three of its members, to give the necessary instruction. One, for example, might take charge of the various matters comprised under the head of requirements of the sick-room, including hygiene and the nature and preparation of food; another, the mode of examining the patient as to the condition of his tongue, pulse, countenance, skin, temperature, posture, and excretions; the mode of administering medicines, their doses and actions; poisons and their antidotes; while a third might busy himself with surgical, obstetrical, and gynæcological appliances and dressings, including the treatment of hæmorrhage.

"Where no county society exists, the same object may be attained by the banding together of any two or three competent physicians in the place. Notice of the time and place of meeting should of course be given in the public prints, and also by card. A small matriculation fee should be charged, and also, where possible, a small fee for each of the instructors, to assist in defraying expenses. The teaching should be as practical as possible—essentially practical—each pupil being obliged to perform her work in the presence of her instructor, not once or twice, but again and again. Free use should be made of the blackboard. The outfit of such an establishment need not exceed fifty, seventy-five, or at most one hundred dollars. There should be frequent examinations, and at the final one a certificate of competency should be be awarded to the successful candidates.

"If the plan now suggested be faithfully carried out, as I confidently believe it may be, either as here presented or with such modifications, changes, or alterations as circumstances may render necessary, it can not fail to be instrumental in saving many lives, in preventing much suffering, in inspiring hope in the sick, and in imparting confidence to the professional attendant. If this plan succeed, I shall feel that I have accomplished the greatest work of my life.

"To aid the pupil in her efforts at acquiring knowledge, she should avail herself of a proper text-book. Of this class of works I have now six lying upon my table, and, after a careful examination, give the preference, as to completeness, to the Hand-Book of Nursing, published under the direction of the Connecticut Training-school for Nurses. A Manual of Nursing, prepared for the Training-school attached to Bellevue Hospital; Anderson's Lectures on Nursing, and Cullingworth's Manual of Nursing, Medical and Surgical, are also excellent productions, worthy of a place in the library of the nurse and of the the physician. Any of these books may be obtained of Blakiston, Son & Co., 1012 Walnut street, Philadelphia, at one dollar a copy. A Manual for Hospital Nurses has been issued by Mr. Edward J. Domville, of London, and is now in its fourth edition; and there is a brochure, entitled Notes on Fever Nursing, from the pen of Dr. James W. Allan, of Glasgow, reprinted in Philadelphia. Much valuable information will be found in the Notes on Nursing, by Miss Florence Nightingale, published soon after her return from the war in the Crimea, where she earned so much glory by her efforts to assist the sick and wounded."

We would only suggest, in addition to these remarks of Dr. Gross, that on account of the infrequent meetings of the county and district medical societies, the work could be prosecuted with greater advantage by the local medical societies in all of the smaller cities or villages, where members can have ready communication with each other, and where it would be found easy, if desired, to secure the aid of benevolent men and women outside of the profession to organize and render any pecuniary or other material aid that might be found necessary. Will not the local medical societies in such places as Joliet, Aurora, Princeton, Springfield, Bloomington, Jacksonville, Peoria, Rock Island, Quincy, and others in Illinois, and in all similar centers of population in other States, take this subject under serious consideration? It is certainly worthy of their full attention.

Novel Mode of Bleeding.—The latest mode of blood-letting is given in a late number of the *British Medical Journal* by Dr. Charles Coppinger, who relieved a serious cerebral congestion by introducing the aspirator needle into the external jugular vein and abstracting at first four ounces of blood, and half an hour later six ounces more. The patient was a fat and plethoric lady fifty years of age.

The Texas Courier-Record of Medicine.—We have received the first number of this new monthly journal. It is edited with spirit and enterprise by Drs. F. E. Daniel and E. L. Stroud, Fort Worth, Texas.

The American Public Health Association.—We again remind our readers that the next annual meeting of this important national organization will commence on November 13, at Detroit, Michigan, and continue in session several days, during which papers will be read on some very important subjects. A full attendance is expected.

An Unhealthy City.—The annual death-rate in St. Petersburg, Russia, is stated to be 51 per 1,000 of the population, which is more than double the death-rate in the principal cities of this country.

SANITARY CONDITION OF THE SUEZ CANAL.—According to the statements in a recent number of the *Pall Mall Gazette*, the Suez Canal is made the receptacle of the sewage and waste water from the stations and towns along its course. And as the water in the canal is stagnant, being very little moved either by currents or tides, it has become very foul and offensive, and appears to be causing much sickness among those who are either delayed in transit or are residing on its banks. This is not encouraging to those who contemplate traveling in that direction.

THE two most common pathological conditions are inflammations and fevers. The changes that take place in the former have been described minutely and in detail. They were determined by experimental research. Somewhat slowly the more complex phenomena characteristic of fever are being similarly observed, and their significance ascertained. The latest contribution to the experimental study of fever that we have seen, is the work done by Dr. Walter Mendelson in the Physiological Institute of the University of Leipzig[1]. He attempted to determine what influence fever, artificially produced, might have on the size of the kidney. The fluctuations in its size were determined and recorded by the onconometer and onconograph of Roy. The experiments were conducted with care, but a description of the details need not be given here, as it is to the results that we wish to call attention. Any changes that may occur in the size ef the kidney must be due to congestion or depletion in a greater or less degree, therefore the onconograph really recorded in these experiments the vascular condition of the organ. It was found that whether fever was produced by the injection of fever-producing agents into the blood, or by subjecting the animal to a high heat in a close box, there was a progressive diminution in the volume of the organ during the rise of bodily temperature. In other words, as pyrexia increased the kidney became more and more anæmic.

To illustrate: On the onconographic record, the bodily temperature being 38.8° C., there appears a uniformly undulating line. At a temperature of 42° C. the undulations are not so marked, although still quite uniform. At 44° the record shows an almost straight line. The amount of blood lost by the kidney was estimated in each experiment, and varied from 7.88 per cent. to 32.49. It was also found that by severing the nerves connected with the kidney, no change occurred in it during a rise of temperature. Almost no change in the size of the organ occurred, also, when the spinal cord was severed towards the head, although if the sciatic was strongly stimulated a slight contraction might be caused. These nerve lesions were produced in the attempt to ascertain whether the changes were due to peripheral or central irritation. The most conclusive experiment on this point was probably that of heating only the blood that flowed through the carotids into the brain. It was then found that almost immediately a contraction of the kidney occurred, and a rise of general arterial pressure. It was therefore concluded that in all probability the contraction of the blood vessels, and consequent contraction of the kidney, was due to the stimulation of the central nervous system, by the abnormally hot blood circulating through it.

Knowing that the blood-supply to the kidney is diminished, we can more readily than ever understand why the secretion of urine is lessened under the same circumstances. Dr. Mendelson also thinks that the presence of albuminuria in many fevers may be accounted for, by supposing that the anæmia of the kidney causes such changes in the renal epithelium as to permit the passage of albumen from the blood through it. But in many fevers, even when considerably contracted, albumen is not present in the urine. In meningitis and cerebritis it is certainly not commonly found, and yet these diseases are often characterized by high temperatures, especially about and within the head. If albuminuria in fever be due to the renal anæmia alone, we would expect it to be of common occurrence in these diseases, for in these, too, in accordance with Dr. Mendelson's experiments, we would naturally expect a decided anæmia of these organs. Is it not probable that the albuminuria of fevers is to be explained, in part, at least, on the ground of material changes in the blood albumenoids. Recently, Semmola, of the University of Naples, has been experimenting on the artificial production of albuminuria. He finds that an over-supply of readily diffusible albuminoids will cause its appearance in the urine. This, however, does not happen, at least to the same extent, when other forms of albumen are used.

Whether anæmia, and consequently a shrinkage of the kidney, are accepted as present in all fevers, their existence in the acute fevers produced in the laboratory is of interest. May not similar changes take place in other glandular organs, as for instance the pancreas, under the same circumstances, and be the cause of the imperfect digestion characteristic of fever, as well as of other symptoms?

[1] "On the Renal Circulation During Fever," by W. Meudelson, M.D, of New York. *Am. Jour. Med. Sci.*, October, 1883.

BOOK REVIEWS.

THE ESSENTIALS OF PATHOLOGY—BY D. TOD GILLIAM, PHILADELPHIA, P. BLAKISTON & CO.

This is a small book of about 300 pages, in which is compactly stated the generally accepted facts of pathology. Unsettled questions have generaly been avoided, the object not being to supplant the larger works on this subject, but to present the facts of pathology concisely, and in the way which the author's experience has shown him to be best. In most respects the subjects treated of are well described and fairly well illustrated. Two faults may be pointed out in regard to the illustrations. Although they are to be found in other works, and evidently have been copied no mention is made of the fact. There is also nothing to show how many times the specimens from which the cuts were made had been magnified.

The two first chapters are devoted to a general consideration of disease and to normal histology. Under the latter head only the cell and its common properties and functions, together with the intercellular substance, and a few lines descriptive of the structure of tissues in general, are treated of. In the next two chapters is taken up the consideration of constructive and destructive processes in disease. Chapters on infiltration, metamorphosis and death follow. In the four succeeding chapters mechanical and functional derangements, fever, inflammation and tumors are discussed. Several chapters are then devoted to new formations in different tissues. Separate chapters are devoted to the pathological states of the commonest tissues and chief organs.

A POCKET BOOK OF PHYSICAL DIAGNOSIS OF THE HEART AND LUNGS FOR THE STUDENT AND PHYSICIAN. By Dr. Edward T. Bruen. Second edition. P. Blakiston Son & Co. Philadelphia.

This is a most excellent book. It treats with fullness sufficient for all ordinary purposes of the physical diagnosis of diseases of the organs of the thoracic cavity. The descriptions of physical signs are clear and their explanation is well given. The few illustrations are of a useful character. A chapter is devoted to the sphygmograph and its relation to heart diseases. The fact that a second edition has been demanded shows that the profession has recognized its good qualitles. Although of a convenient size it deserves a more dignified title than that of a "pocket book."

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY. Authors and Subjects. Vol. IV. E—Fizes. Washington: Government Printing Office, 1883. 4° [12] 1033 p.p., muslin.

Dr. Billings, in his report of presentation of this volume to Surgeon-General Crane, states that it contains 4,802 authorities, representing 1,926 volumes and 3,885 pamphlets. It also includes 12,361 subject-titles of separate works and pamphlets, and 48,977 titles of articles in periodicals.

The titles in the four volumes now published of the Index Catalogue represent, author titles, 35,431 titles, 24,967 volumes, 27,479 pamphlets; subject titles, 41,483 book titles, 149,737 journal articles, and 4,335 portraits.

This volume is most voluminous in titles on the subjects of the ear, education, eye, and fevers—the latter (fevers) having about 300 pages devoted to it alone.

DOMESTIC CORRESPONDENCE.

CAMBRIDGE, MASS., October 4, 1882.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Dear Sir:—In the weekly number of this journal under date of September 22 appears an original article entitled "Epidemic Jaundice Among Children," by Alex. Y. P. Garnett, M.D., Emeritus Professor of Clinical Medicine in the National Medical College, Washington, D. C. After considering the subject at some length the author reverts to the "influence of the nervous sytem as one of the causative agents in the question of jaundice." Here he mentions several factors which he regards as having an important bearing on the etiology and origin of such an epidemic. These for the most part I do not now care to consider, but there is one statement made which deserves at least a passing notice; it is this: "The influence of anger upon the saliva of animals, transforming a harmless secretion into an active poison." Again, the author says, "Evidence is not wanting to prove that even rabies canina has been produced by the bite of an enraged dog which was in all respects healthy." Now, some few years since I was summoned as an expert witness, on both sides, of a case brought before the Supreme court of this State, where a lad died of an undoubted attack of hydrophobia caused by the bite of a dog. The child was bitten some two months previously, and was treated by a physician at the time. The animal alleged to have bitten the boy was produced and exhibited at the court. The dog was sportive or playful, and showed no signs of disease. Scarcely one of the many accomplished physicians called on either side ventured to offer the opinion that a bite of any animal, however enraged, unless at the time affected with rabies, could produce hydrophobia in man, although a great effort was made by learned and astute counsel on the part of plaintiff to show that such a result might follow. The literature of the subject was quite thoroughly considered by the court, as the various experts on either side were not only examined by counsel as to their personal experience and observation of this affection, but also as to their knowledge or acquaintance with the different authors who have written upon the subject of rabies and hydrophobia. The chief justice who presided took great interest in the case, and offered every opportunity for a thorough consideration of the subject. The prosecution appeared to rely largely upon a foot-note which appeared in Fleming's work on rabies and hy-

drophobia, to show that the saliva of the enraged animal, otherwise healthy, could impart hydrophobia in man; but a subsequent work of Fleming touching the same subject seemed wholly to have invalidated that statement. Owing to sickness and death of the senior counsel of the defense the case was dropped indefinitely. Now, what I would like to inquire in view of these facts is, whether the writer of the article referred to, or any one of the readers of your valuable journal has any facts or reliable data (not theories or opinions) tending to show that hydrophobia can be produced in man by the bite of an enraged animal which is in all respects healthy. Very respectfully, AUGUSTUS P. CLARKE, M.D.,

693 Main Street, cor. Bigelow Street.

EDITOR JOURNAL AMERICAN MEDICAL ASSOCIATION:

Having been for twenty-five years a victim of hay-fever, and having been compelled to suffer all the torments of this disease, sitting in a chair for sixteen consecutive nights in order to get a modicum of sleep and rest, and having ransacked the whole literature of hay-fever as known in the English language, as far as I could obtain it, I am, as you may well imagine, much interested in anything that appertains to this inscrutable and abominable disease. No living man, who is not a victim, can appreciate the agony of hay-fever. Allow me to say that so far as twenty-five years can give a man authority to speak, I say that it is my opinion that no remedy has as yet been found; no, not so much as even a palliative for genuine hay-fever. For the last twenty-five years half of the materia medica has either gone through my nose, down my throat, or has been applied externally with this mournful result, *nothing!*

It is my opinion that for the cure of genuine hay-fever, as yet nothing is known. I write thus, as in the last number of the JOURNAL a Dr. Phillips lauds belladonna as a specific. I have tried belladonna to its utmost limit of safety, and either he never saw a genuine case of the disease, or is mistaken somewhere, for allow me to say that so far as my experience goes, nothing can cut short this disease. I have corresponded with half a hundred of victims and tried to learn their treatment, and the most intelligent all agree that they have to fight the thing through or leave in time to escape its attacks. My own opinion is that those who can cure hay-fever have never seen a genuine case of it, but have mistaken it for a case of common cold. C. HIXSON, M.D.

O'Fallon, Ill.

WHO DOES THE STEALING?

CHICAGO., October 6, 1883.

TO THE EDITOR: Dr. Casebeer, in introducing the subject of his interesting paper, mentions that Prof. A. A. Smith lectured at Bellevue Hospital Medical College on "The frequent repetition of doses of medicine." The lecture referred to, though embracing the consideration of what is purely within the domain of scientific medicine, has been made to serve the purpose of a certain class of irregulars, in their endeavor to prove that their "school" is correct, in all things, and that the "old school" has at last accepted Homœopathy, pure and simple. As an instance of this tendency on the part of irregulars to belittle the profession, in the estimation of the outside world, I quote the following, clipped from the *Microcosm*, a well known scientific journal, and widely circulated among teachers and clergymen.

"*To the Editor:* In the April number of your valuable journal, Dr. G. A. Stuart says: 'The regular profession throughout the whole civilized world challenge him as they have challenged Hahneman, and any of his disciples to his proofs (referring to the only true law of therapeutics, as discovered by Hahneman). Isn't it rather late in the day to utter such stuff, even by a so-called regular, when they are every day stealing the remedies of homœopathy, as witness the lecture delivered recently at Bellevue College by Dr. A. A. Smith? Homœopathists are the only physicians who claim to administer medicine according to its well known law of cure, and not even faith is needed to demonstrate its truth.

"A. P. BOWIE, M.D."

It is by such apparently logical arguments as the above that the world at large is influenced by irregulars, from the quack who patents his wisdom to those who "glory in their conflict with dogma." Indeed such arguments would seem to prevail in some of our medical societies, where strong position is at times taken against a practitioner who perhaps unintentionally violates the code, though the ones who accuse him are only too ready to affiliate with men who, kicked out of the back door of the profession, ride into favor upon the triumphal car of some popular "pathy" and are eagerly invited to be "one of us." If homœopathy, or any other irregular practice, can grow into favor in a few years, surely there is little need that our young men should pursue long courses of study at reputable colleges. If the proper thing is "to consort with the pathists," students of medicine may as well pass through a term at some happy-go-easy institution, rest quietly until an anti-code committee reports successfully, and then claim position with the elect.

If those who in professional circles advocate the claims of homœopathy, be sincere in the performance of a supposed duty, we should pity and seek to enlighten them. If, on the contrary, they are proven to be merely the advocates of expediency, we should despise them as they are known to be despised by those with whom they would affiliate. That there are many who "know not what they do," I may mention that when the subject of appointing a committee on revision of the code was brought up before the St. Louis Medical Society, one or the oldest members stated that he had frequently responded to the request of a lady practitioner for consultation, though the lady a graduate of an irregular school. He qualified his assertion—in response to my inquiry—by saying that he "did not stay long at a time."

At that meeting I took the position that homœopathy, as such, had no place in American practice; that he who gathered shekels under a confessedly false name was not sincere—which is a milder word

than dishonest. I need not tell the "Nestor of American medicine" that Hahnemann, though making it the corner-stone of his system, did not discover the law of *similia*. Every scholar knows that 2,000 years before Hahnemann, Hippocrates advised and practiced the use of contraries and similars, and proved their results upon the living body. Haller also "proved" the action of various remedies, and is credited by Hahnemann with this half of the "law." But singular to relate, the "Messiah of Medicine" is strangely silent as to Paracelsus, who, two centuries before his time, announced to the world the doctrine of similars, using the legend, now so popular, "*similia similibus curantur*" (vide Ed. Geneva, 1658). The same "Monarch of Medicine" in his "*Fragmenta Medicina*" (page 168, et seq.), heads a lengthy paragraph with these words. "*Simile, similis cura; non contrarium,*" and then goes on to prove this, by the varied actions of mercury, sulphur, and salt.

So much for the vaunted discovery of the "law." Now, as to its permanency. Before Hahnemann died his system had ceased to bind his own disciples, despite the fact that he had pronounced his "law" unchangeable, and declared anathema against what he called "the practitioners of the new mongrel system, a mixture of homæopathic and allopathic processes." Thirty-five years later, Dr. Wyld, vice president of the British Homœopathic Society, wrote to Dr. W. B. Richardson (*London Laneet*, 1877,) as follows: "First, that the views of Hahnemann are often extreme and incorrect. Second, that Hippocrates was right, when he said that some diseases can be treated by similars and some by contraries; therefore it is unwise and incorrect to assume the title of homœopathist. Third, although many believe that the action of the infinitesimal in nature can be demonstrated, its use in medicine is practically, by a large number in this country, all but abandoned."

The "Great Master" ignored scientific medicine and surgery while theorizing to such an extent as to leave no record of the cases treated by him. Yet every year the leading practitioners of his system flock to the European clinics and to "regular" schools in America to perfect themselves in rational treatment. If then we are to credit homœopathy with an existence separate and apart from Hahnemann, its prophet, where is the "law" and where the "stealing" by Professor Smith? The fact is incontrovertible that in America, as well as in England, the mixed system, so much abhorred by Hahnemann, is the general practice of his followers. That the "law" itself is not infallible is evidenced by the fact that the itch—whose spiritual "manifestation was the cause of mania, gout, and cancer,—is due to a very material parasite, which a short treatment, with a very common agent," potentially sends to its long home. Lead palsy, as well as consumption, and many other ills that flesh is heir to, are due to microscopically demonstrable materiality, the spiritual factor in all such cases being manifested after death has claimed the case.

As to the choice of remedies the true physician is not bound by any so-called law, but is free to select that which is best for his patient. If a homœopath finds a remedy that I think well of I will use it, so if a negro should discover a medicinal plant I would use it—as I have already used one medicinal product of the plantation. The physician gives as freely as he takes, else the homœopath's occupation would be gone, and when it comes to "stealing" Prof. Smith can retaliate with a vengeance.

Respectfully yours,

P. H. CRONIN, PH.B., A.M., M.D.
49 N. State street.

FOREIGN CORRESPONDENCE.

PARIS, Sept. 25, 1883.

The annual meeting of the French Association for the Advancement of Science was this year held at Rouen, the medical section of which was presided over by Dr. Jules Rochard, member of the Paris Academy of Medicine and Inspector General of Hospitals in the Marine Department. Some of the papers that were read on the occasion were most interesting, but even of these I can only select a few, and send you but brief extracts.

Dr. Gallard, a well-known gynæcologist, made a communication on the physiology of menstruation—a subject, he said, that required to be revised, as there were two currents of opinion entertained in the profession as to its mechanism, some admitting the correlation that existed between the menstrual flow of blood and ovulation in the light of cause and effect, whilst others looked upon the presence of the two phenomena as a simple coincidence, even although they may occur simultaneously. After having gone over the history of the question from the days of Hippocrates to the present time, he referred to the writings of Negrier, who was the first to point out the correlation that existed between menstruation and ovulation. According to this author the latter always accompanied the former, and, in support of his theory, he mentioned the fact that when the sexual or conceiving period of a woman's life ends, menstruation ceases, the inference therefore is that the one is the consequence of the other. The adversaries of this theory declare that there is no necessary correlation between the two acts as menstruation had taken place in women who were deprived of ovaries, whether congenitally or by operation as in ovariotomy. To which Dr. Gallard replied that he never met with a case of congenital absence of both ovaries in which the menses took place, and if after ovariotomy there have been recurrences of uterine hæmorrhage, yet even these, though they may be frequent, do not constitute menstruation properly so called, as there is no periodicty in the flow of blood which does not last so long, and the quantity of the latter is by no means what is observed in the normal function. Dr. Gallard then referred to the experience of Dr. Séan, the eminent surgeon and ovariotomist, who remarked that he has known uterine hæmorrhages to occur even after other capital operations besides ovariotomy, whatever the organ or region operated on. Dr. Gallard further

remarked that in some of the cases in which menstruation took place after ovariotomy there was no doubt that the operation was imperfectly performed, that is to say, there was a small portion of one or both ovaries left behind, which, even if it be a single lobule, is sufficient to perpetuate the function of menstruation.

Owing to the extensive employment of hypodermic injections in general practice, and the critical remarks called forth in consequence, Dr. Voisin thought proper to defend this method of treatment against the attacks leveled against it, as he considered it excellent, and that it was rendered dangerous only in ignorant hands and by its abuse. Dr. Voisin, who is physician to the Salpetrière Asylum for female lunatics, has had great experience with this method, and wished to impress upon the meeting the great advantage it posessed over all other methods, particularly in the treatment of insane and nervous subjects. The effect obtained was powerful, precise, and offered no inconvenience, provided the necessary precautions were observed and the injections be performed by the medical man himself or any other competent person, but the patient should on no account be allowed to do it himself or herself, as it leads to abuse, particularly when narcotics or anodynes are prescribed.

DeBurot, of Rochefort, made some observations on intermittent fevers as they reign in that seaport town. He found that intermittent fever, notwithstanding the continual turning up of the soil, has cousiderably diminished within the last fourteen years, but pulmonary phthisis has become more frequent. The granular form was observed even among confirmed malarious subjects, in whom the spleen was considerably enlarged, and this condition co-existed with extensive cavities in the lungs. Typhoid fever had not made its appearance for some time, at least epidemically, though it is always more or less prevalent in the town. Pneumonia of the typhoid form has also been rather prevalent. The author of these observations intended to prove that intermittent fever, tuberculosis and typhoid fever were not incompatible with one another.

At the close of the meeting a proposition was made to the effect that measures should be taken for the constitution of a board of health on the basis of those existing in most civilized countries, which should be competent to decide all matters connected with public hygiene, instead of having them, as at present, under the control of several departments. The expediency of such a measure had already been officially represented several times by the Academy of Medicine and other learned bodies, but the Government have hitherto shown a deaf ear. The consequence is, questions of such vital importance as that of public sanitation are still left in the hands of the Municipal Council, the Prefect of the Seine, the Prefect of Police and the Minister of the Interior, who surely are no more competent to deal with such matters than medical men would be to direct the movements of a fleet.

The next annual meeting of the Association is to be held at Blois, in August, 1884, and Prof. Verneuil has been elected president.

Intelligence has been received of the death of M. Thuillier, one of the members of the French Medical Mission referred to in my letter of the 8th of August, which was sent out to Egypt at the instigation of M. Pasteur to investigate the nature of the cholera that has been raging in that country for nearly three months. M. Thuillier was not a medical man, as he was supposed to have been, but a doctor of sciences. He nevertheless showed great aptitude for biological researches, which attracted the notice of M. Pasteur, who employed him in his laboratory. The medical mission, composed of four members, left Paris about six weeks ago, and on their arrival in Egypt they dispersed themselves in different quarters to carry on their researches independently of one another. M. Thuillier contracted the disease in a hospital and succumbed in a few hours at the early age of twenty-seven, and, it may be said, a victim to duty in the midst of the deepest regret, not only by all who knew him, but his death is considered a great loss to science in general, and to biological science in particular.

A. B.

NECROLOGY.

SLAUGHTER, ALFRED E., M.D., was born at Orange Co. Court House, Va., August 24, 1839, died of consumption, at his home in Gordonsville, Va., Jan. 11, 1883. Alfred E. Slaughter, M.D., was the son of Dr. T. T. Slaughter, of Orange Co., Va.; educated at Col. Haines' school, Buckingham Co., Va.; took his degree in medicine in 1860, at the University of Virginia, and commenced his professional life at Gordonsville in 1861, but was soon called to help the army of Northern Virginia, where he remained until the "fateful day at Appomattox" (except when he was detached in charge of some of the hospitals), when he returned home and resumed his practice, which he continued until near the time of his death.

An appreciative and lengthy report on his professional life and character was prepared shortly after his death by the Peadmont Medical Association. This, with a series of resolutions, was printed in the Virginia *Medical Monthly* and by the newspapers of Orange Co.

F. D. CUNNINGHAM, M. D.,
Virginia.

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM SEPT. 28, 1883, TO OCT. 5, 1883.

Tilton, H. R., Major and Surgeon: assigned to duty as Post Surgeon at Fort Wayne, Michigan (Par. 4, S. O. 183, Department of the East, September 28, 1883).

Brechemin, Louis, Captain and Assistant Surgeon: relieved from duty at Nort Columbus, N. Y., and assigned to duty at Fort Wadsworth, N. Y. (Par. 5, S. O. 183, Department of the East, September 28, 1883.)

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. I. SATURDAY, OCTOBER 20, 1883. NO. 15.

ORIGINAL ARTICLES.

AN EXPERIMENTAL INQUIRY INTO THE CAUSES OF THE VARIATIONS OF PULSE-WAVE VELOCITY AND DURATION OF THE CARDIO-AORTIC OR PRESPHYGMIC INTERVAL OBSERVED IN MAN.

BY A. T. KEYT, M.D.

"In every truth attained there is utility, either at hand or among the certainties of the future."—PAGET.

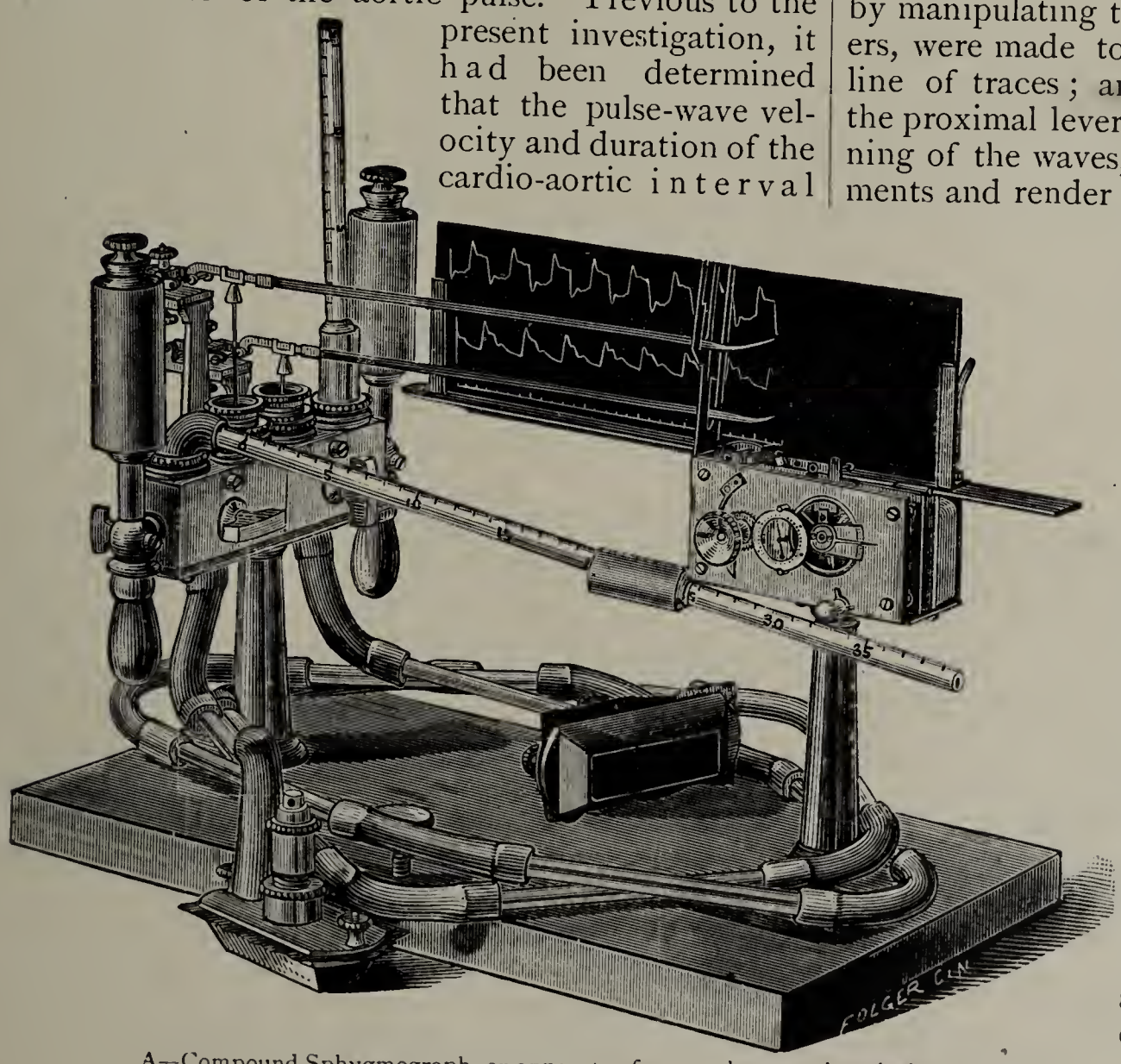
The work of the present essay was devised and prosecuted with the conviction that the points to be established were of interest and importance, and that the graphic method afforded the facility for their successful study.

Our knowledge of velocity of the pulse-wave has all been acquired within a comparatively recent period, and still later are our acquisitions in regard to the interval between the beginning of ventricular systole and rise of the aortic pulse. Previous to the present investigation, it had been determined that the pulse-wave velocity and duration of the cardio-aortic interval were both subject to variations, but the real causes of the variations remained to be determined by experimental inquiry and observation.

If, in the following pages, we make frequent reference to our own previous observations, it is because they are in the line of the present investigation, and have led up to the extension we hope to develope.

The experiments were made with the author's apparatus for simultaneous inscriptions (see cut), which, as known, differs from Marey's, notably in transmitting by water instead of air. This mechanism, on account of convenience and accuracy, was found admirably adapted to the work in hand. Also the author's accustomed method was followed in the measurements of the time intervals, and preparation of the slides for illustration.

Whilst the movements were being written, the chronograph also wrote the time in fifths of seconds. Immediately after an experiment, the slide was repassed, and while halted at selected points, the levers, by manipulating the membrane or tube of the explorers, were made to describe their curves across the line of traces; and it was usually arranged so that the proximal lever would cross at or near the beginning of the waves, in order to simplify the measurements and render the time-relations more apparent to the eye. These lines are synchronous signals cutting the traces at the same instant, and always indicate the exact time-relation to each other of the movements recorded.



A—Compound Sphygmograph, or apparatus for symultaneous inscriptions.

The measurements were carefully made on the slides, by means of a transparent isinglass scale, ruled in 1-100ths of an inch. With this measure and the chronogram, and a magnifying glass, it was easy to compute the time in fine fractions of a second. This was done, and the results written on the slides.

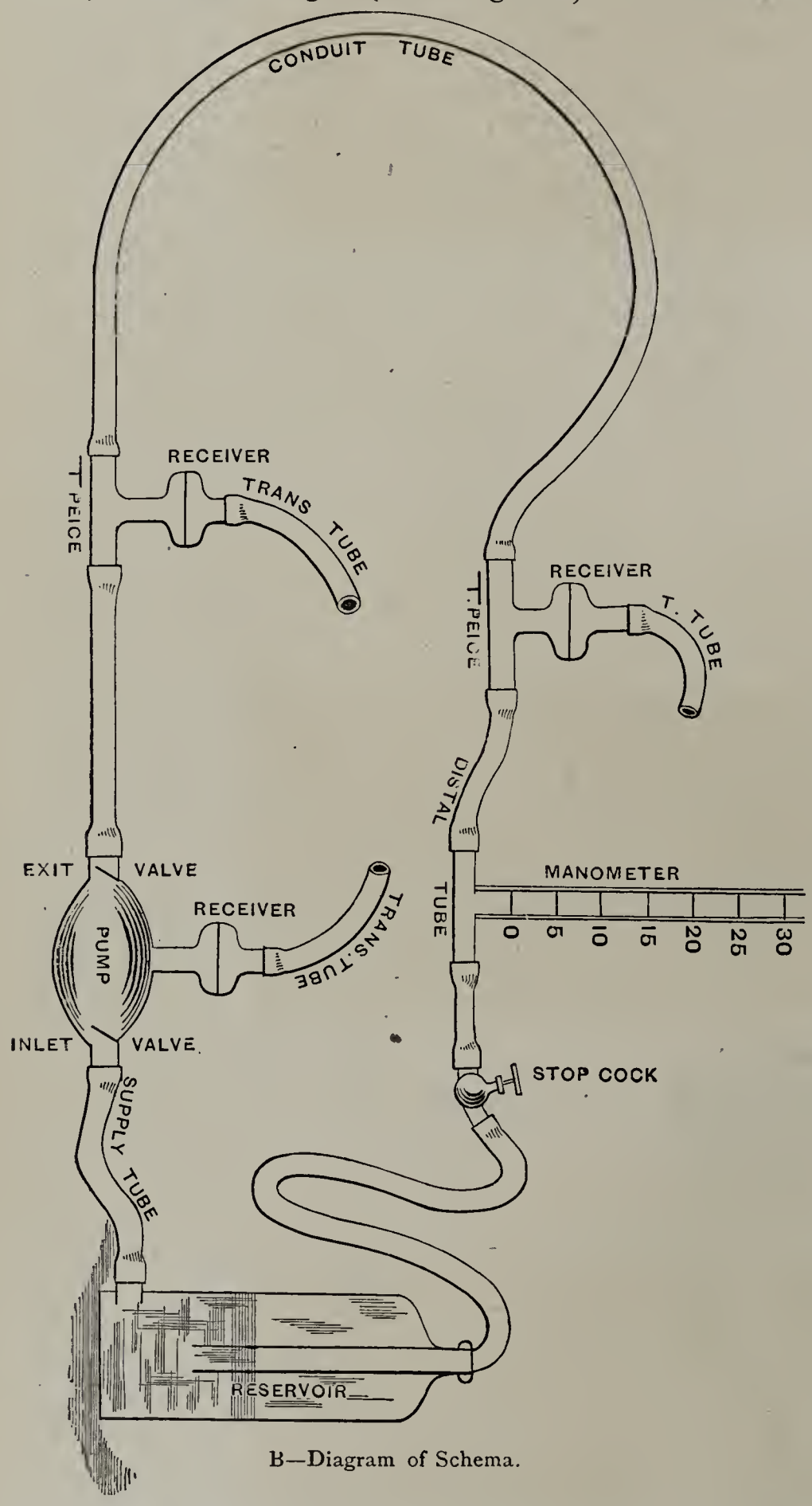
The engravings are faithful reproductions throughout. The lines were photographed on wood, using the glass slides as negatives, and then the engraver, with great care and skill, followed the lines without deviation. So perfect is this work, that the fine measurements

made on the glasses are found to hold good in the reproductions.

CHAPTER I.

EXPERIMENTS ON THE SCHEMA UNDER VARIOUS CONDITIONS, BEARING UPON THE CAUSES OF THE VARIATIONS OF PULSE-WAVE VELOCITY OBSERVED IN MAN.

The schema employed was very simple, yet satisfactory in its working. (See diagram.) The tube



B—Diagram of Schema.

or system conducting the liquid waves connected at either end with one of the horizontal limbs of a hollow T piece. The opposite limb of the proximal T connected with a tube twelve inches long, leading to the egress neck of an elastic bulb or pump. The ingress neck of the pump connected with a tube of convenient length leading to a reservoir. The opposite limb of the distal T connected with a flexible tube, three feet long, provided with a stop-cock one foot from its outer end, and communicating near its middle with a water manometer graduated in inches. The vertical limbs of the Ts communicated with the transmission tubes of the recording apparatus, through the media of circular chambers, each divided transversely by a delicate elastic diaphragm; said receptacles being substituted for the ordinary explorers, and here termed "receivers."

Thus the reservoir supplied the liquid; the pump sent the waves along the conduits; the stop-cock regulated the discharge; the manometer measured the pressure; the T pieces and receivers permitted the waves to act directly upon the recording mechanism, and the latter registered their form and time as they manifested at the points of observation. The exit tube could be placed to discharge again into the reservior, or a separate vessel. The pressure could be raised to any height by working the pump with the exit stop-cock closed, or partially so. A current as swift as desired could be created through the tubes by elevating the reservoir and opening the exit tube placed to discharge at a lower level. Different conduit tubes could readily be placed between the T pieces. The form of the waves could easily be varied by the manner of working the pump. The conditions could be changed at will, and the graphic apparatus would faithfully record the results.

It will be observed that our experiments on liquid waves in elastic tubes differ from Marey's and others —first, in the character of the graphic apparatus; second, in transmitting the waves directly from the interior of the schema; and third, in the close showings and estimates of the time intervals and wave velocities as manifesting under a variety of conditions.

These experiments were essential to the success and completeness of results aimed at in the investigation; and, as will be seen, the results when comparable with those of other experimenters, are sometimes confirmatory, other times contradictory.

PROBLEM I. To determine the influence of tubes of different degrees of stiffness or elasticity on the velocity of the liquid waves sent along their interior.

First experiment: A glass tube, three-sixteenth inch bore, and six feet long, bent in ⊂ form, was placed in communication with the two Ts of the schema. The water in the reservoir was at such level that the pressure in the tube measured four inches by the manometer. The exit stop-cock was open, and the pump worked rythmically by the hand with medium quickness and force. The graphic apparatus in order, with smoked glass in position and chronograph running, the carriage was started, and traces of the waves simultaneously obtained from the two points. Immediately the carriage holding the slide was passed through again, halting it where the upper lever would be opposite, or nearly, the beginning points of the proximal waves, and then striking both levers across the line of the traces. These lines made by the lev-

ers serve to indicate the distance between the beginnings of the proximal and distal waves, and this distance measured[1] on the corresponding part of the chronogram gives the time difference between them. In this experiment, Fig. 1 shows the result. The

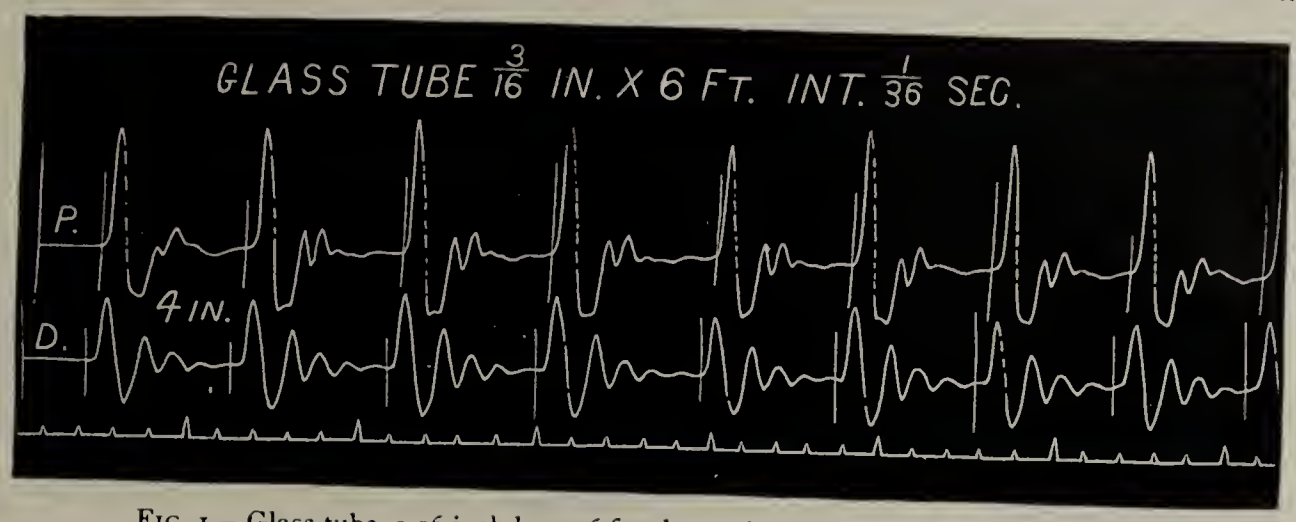


FIG. 1.—Glass tube. 3-16 inch bore, 6 feet long; interval measured at 1-36 second.

retardation of the distal waves on the proximal is seen to be extremely short. It seems to measure about 1½ hundredths of an inch, while the fifths of seconds measure 11 hundredths, which would give a time difference of $\frac{1}{36}$ second, and a wave velocity over the six feet of distance of 216 feet per second.

Second experiment: A thick, firm rubber tube of the same bore and length was substituted for the glass, and the experiment under all other conditions conducted precisely as in the preceding. The result is shown in Fig. 2. The measurement is placed

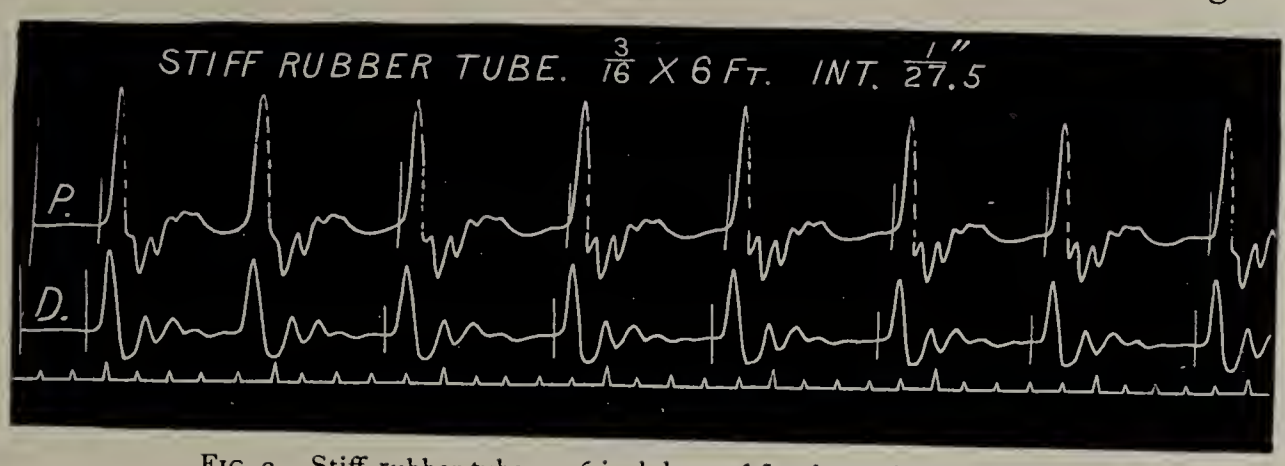


FIG. 2.—Stiff rubber tube, 3-16 inch bore, 6 feet long; int. 1-27.5 sec.

at $\frac{2}{11}$ of $\frac{1}{5} = \frac{1}{27.5}$ second, and which gives a wave velocity of 165 feet per second.

Third experiment: A softer and more yielding tube of the same bore and length was employed. Fig. 3 shows the result. Formula, $\frac{5}{12}$ of $\frac{1}{5} = \frac{1}{12}$ second;

FIG. 3.—Ordinary rubber tube, 3-16 inch bore, 6 feet long; int. 1-12 sec.

wave velocity 72 feet per second.

[1] Measurements are readily made by hair dividers and a hundredths inch scale, but more conveniently still by the use of a transparent scale of fine divisions.

Fourth experiment: A lighter tube than last, $\frac{1}{8}$ inch bore and same length, employed. Result in Fig. 4. Formula, $\frac{7}{12}$ of $\frac{1}{5} = \frac{1}{8.5}$ second; wave velocity 51 feet per second.

Fifth experiment: A tube of last description was made very soft and lax, and expanded to $\frac{3}{16}$ inch bore, by steeping in gasoline, and then put in experiment. The first pair of waves of Fig. 5, traced under parallel conditions with the others, shows the result. Formula, $\frac{11}{23}$ of $\frac{2}{5} = \frac{1}{5.2}$ second; wave velocity 31 feet per second.

Sixth experiment: Not being able to find in the market tubes of the thinness desired, we prepared one from a strip of delicate rubber cloth, by cementing the edges. This tube, $\frac{3}{16}$ inch bore and two feet long, placed in experiment, gave Fig. 6 as result. Formula, time-difference $\frac{1}{14}$ second for 2 feet, would make $\frac{3}{14}$ second for 6 feet; wave-velocity 28 feet per second.

Seventh experiment: A chicken's intestine, averaging ¼ inch diameter and two feet long, placed in experiment, gave Fig. 7. Time-difference $\frac{1}{8}$ second, equal to $\frac{3}{8}$ second for 6 feet; wave-velocity 16 feet per second.

Eighth experiment: A calf's aorta, averaging ½

inch diameter, and 18 inches long, with the branches tied, gave Fig. 8. Time-difference, $\frac{1}{8.5}$, or $\frac{2}{17}$ second for 1½ feet, equal to $\frac{8}{17}$ second for 6 feet; wave-velocity 12.75 feet per second. This arterial tube was very soft and elastic, but apparently firmer than the chicken's intestine. We shall see further on that size of tube is an important factor of modification.

and tracings taken at various pressures, and many experiments made, but always with the same negative result. Fig. 9 was taken with the chicken gut, before described, at 10 inches pressure. The time-difference measures the same, viz.: $\frac{1}{10}$ second, under the opposite modes of impulsion. Another illustration of this fact is shown in Fig. 11.

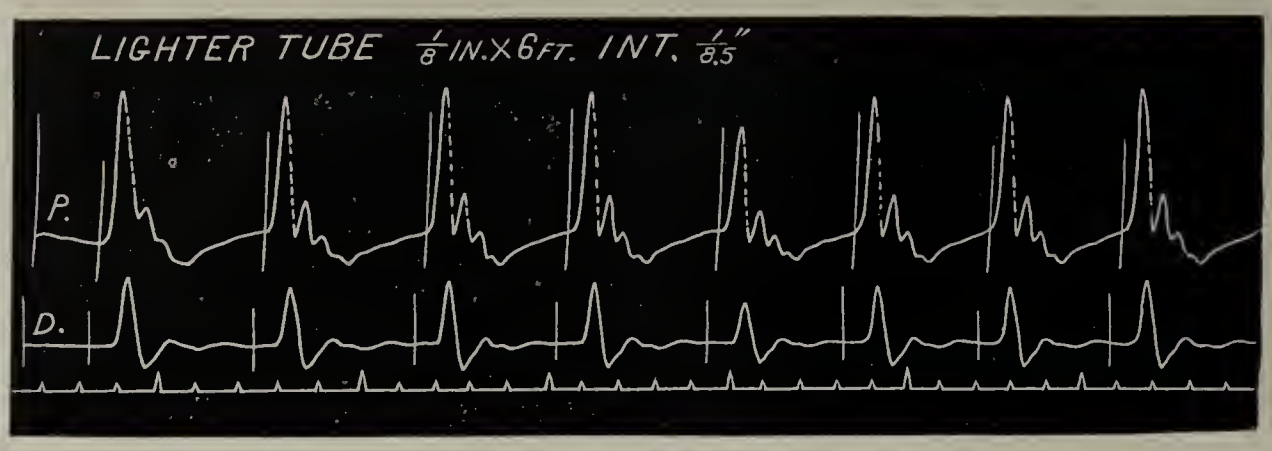


FIG. 4.—Lighter tube, 1-8 inch bore, 6 feet long; int. 1-8.5 sec.

These experiments demonstrate in a specific manner, that the velocity of liquid waves in elastic tubes is proportional directly to the stiffness, inversely to the elasticity of the tube traversed. And as bearing upon the rate of pulse propagation in living arteries, they indicate the important modifying influence

This negative result was unlooked for, and is at variance with observations announced by Marey. Nevertheless, in view of our numerous and varied and carefully conducted experiments, to the end of testing this point, we are compelled to accept the fact as shown and stated.

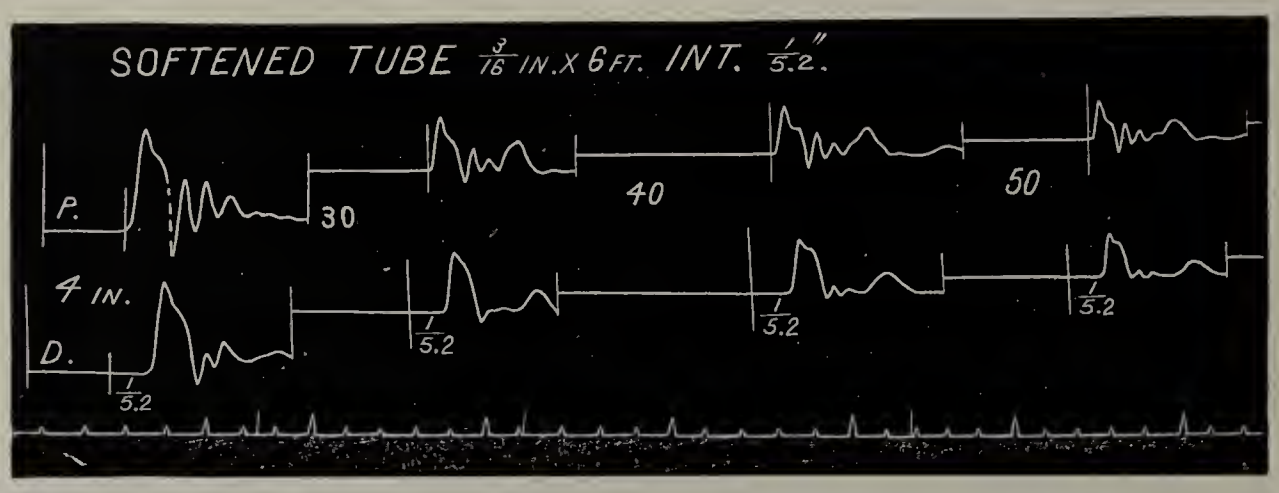


FIG. 5.—Tube softened in gasoline, 3-16 inch bore, 6 feet long; int. 1-5.2 sec.

which the state of the arterial walls as to stiffness or elasticity must exert upon the same. In the next chapter will be given actual verifications from man of a positive ratio between the velocity of the pulse-wave and degree of arterial stiffness.

PROBLEM II.—To determine whether the velocity

Obviously the fact teaches that the rate of pulse propagation is not modified directly by the manner of the heart's action; whether it beats quick, launching a sharp wave, or slow, sending a sloping wave, the pulse-wave velocity along the arteries is all the same.

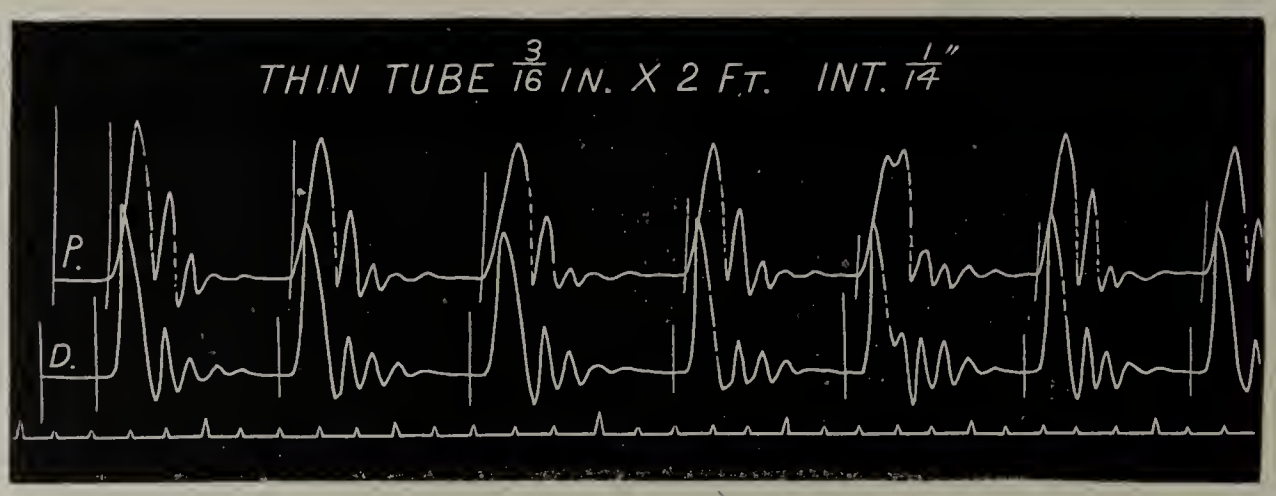


FIG. 6.—Thin rubber tube, 3-16 inch bore, 2 feet long; int. 1-14 sec. for 6 feet.

of liquid waves in the interior of elastic tubes is modified by the mode of impulsion.

Experiments:—Under stated conditions whilst tracings were being taken, the pump for one part of the run was worked with quick. and for another part with slow impulsion. Different tubes were employed

PROBLEM III.—To determine whether the velocity of liquid waves in the interior of elastic tubes is modified by the size of the tube.

It was first sought to solve this problem by the use of ordinary elastic tubing found in the shops, and so a tube 3/8 inch bore and six feet long was put in ex-

periment to obtain results comparable with those of Fig 3. Fig. 10 was obtained. The time-difference is $\frac{1}{12}$ second.

But this experiment and result is not sufficiently conclusive, inasmuch as the larger tube was notably stiffer than the smaller, and this quality, as we have seen, would of itself cause a swifter propagation of the waves. However, as the time intervals in the two tubes were the same, the speeding effect of stiffer walls must have been counter balanced by a slowing effect of larger size.

To more successfully test the point, it was necessary to experiment with tubes of different diameters but of the same thinness and elasticity. Accordingly a tube one-half inch diameter and two feet long was prepared from the same rubber-cloth and in the same manner as the tube 3-16 inch diameter, which gave Fig. 6. An experiment with this tube gave Fig. 11, in which the time-difference is 1-9 second.

It will be noticed that the interval in Fig. 6 is 1-14 second, so this comparative experiment shows that wave propagation is slower in larger and faster in smaller tubes. Compare also Figs. 13 and 14.

To the same end Figs. 7 and 8 may also be compared, for, although the gut was laxer than the artery, the fact that the latter gave a slower rate of transmission shows the result was due alone to the larger size.

From this positive result we learn that, other things being equal, the pulse-wave travels slower along larger and faster along small arteries.

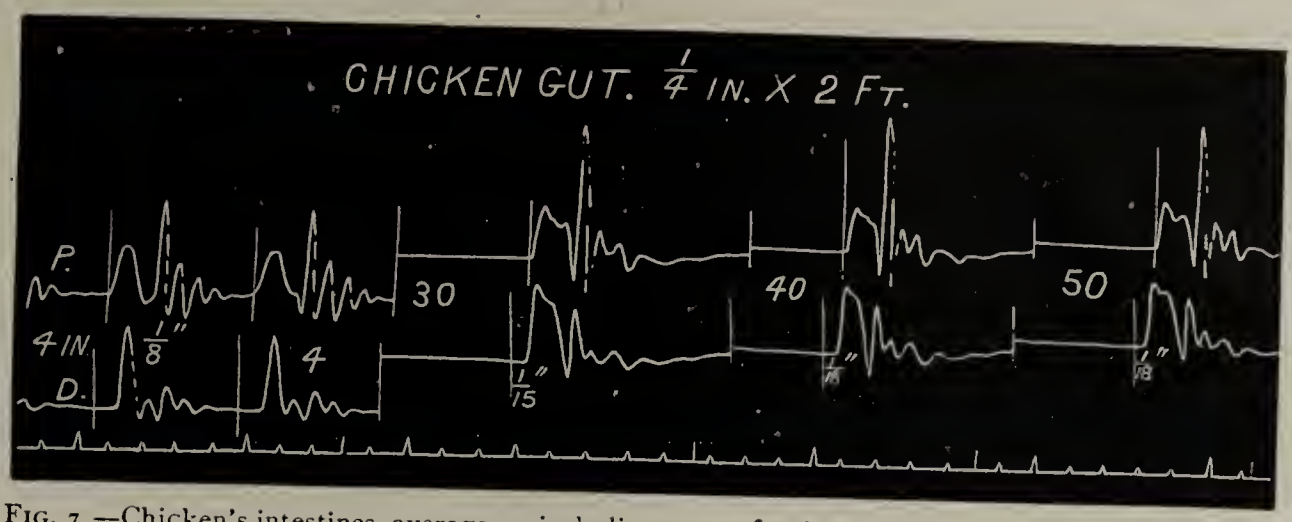


FIG. 7.—Chicken's intestines, average 1-4 inch diameter, 2 feet long; int. 1-3 sec.=3-8 sec. for 6 feet.

PROBLEM IV.—To determine whether the velocity of liquid waves in elastic tubes is modified by a longer or shorter distance from the pump.

For this solution the receivers were placed on a continuation of the 3-16 inch rubber tube, each six feet further from their original positions, and the waves traced at this remoter distance under like conditions as obtained in the production of Fig. 3.

Fig. 12 shows the result—time-difference 1-12 second, the same as in figure 3, which represents the nearer distance. However, it appears that the points of the waves are slightly further removed from the beginnings as the distance from the pump increases.

We are informed through this experiment that distance from the heart neither accelerates nor retards the velocity of the beginnings of pulse-waves.

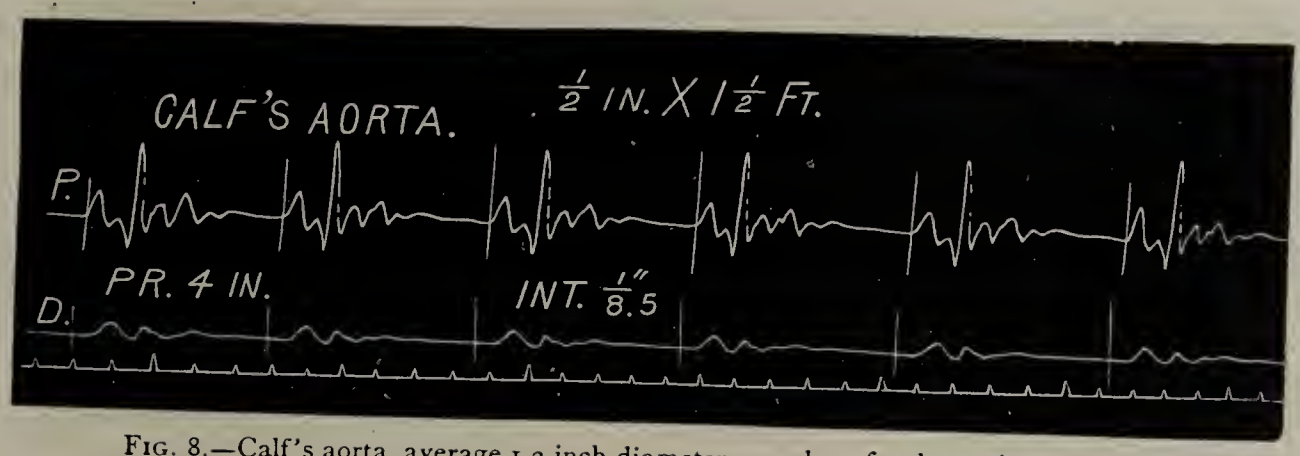


FIG. 8.—Calf's aorta, average 1-2 inch diameter, 1 and 1-2 feet long; int. 1-8.5 sec.‖ 4.8.5 sec. for 6 feet.

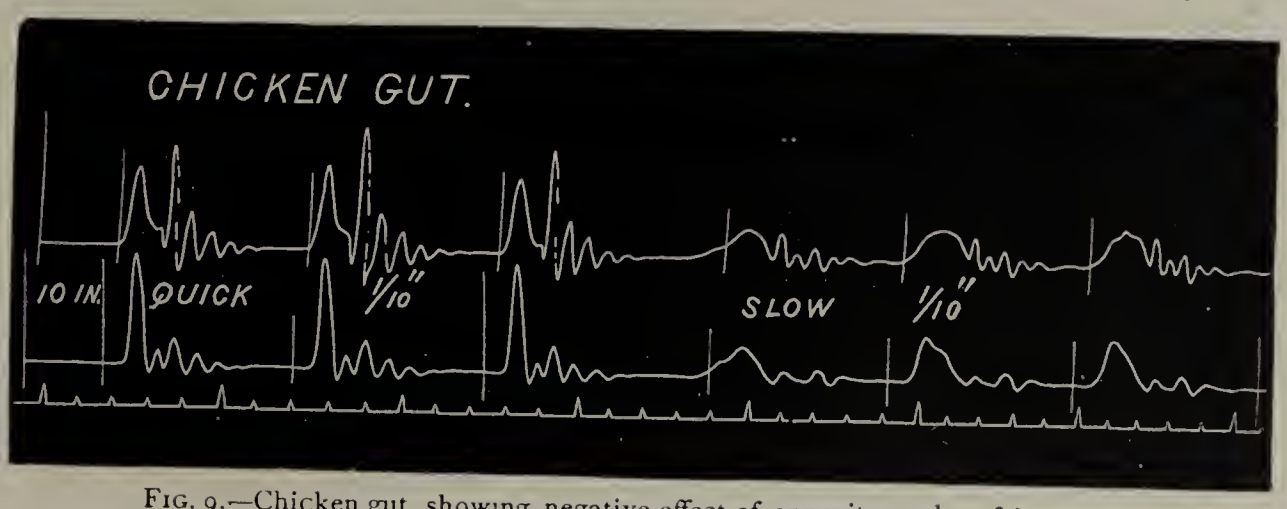


FIG. 9.—Chicken gut, showing negative effect of opposite modes of impulsion.

PROBLEM V.—To determine the influence of different pressures on the velocity of liquid waves in elastic tubes.

First experiment:—Result shown in Fig. 5, where with the softened tube the pressure was successively raised for each wave traced, as shown in the figure. It will be observed that the time-difference is the same at 4, 30, 40 and 50 inches pressure respectively.

Second experiment:—Result shown in Fig. 7, where with the chicken gut, after the first waves taken at the usual four inches, the pressure was successively raised as indicated. The result here is seen to be positive, the time-difference at four inches is 1/8 second, at 30 inches 1-15 second, at 40 and 50 inches 1-18 second.

Third experiment:—Thin rubber tube, 3-16 inch, at different pressures. Result in Fig. 13.

The showing is negative, the time-difference running 1-14 second throughout.

Fifth experiment:—The calf's aorta, before described, employed and traces taken at different pressures. Fig. 15 shows the result.

Intervals respectively 2-17 second at 4 and 10 inches pressure, 2-21 second at 20 inches pressure, 2-25 second at 30 inches pressure, and 2-29 second at 40 inches pressure. Another positive result.

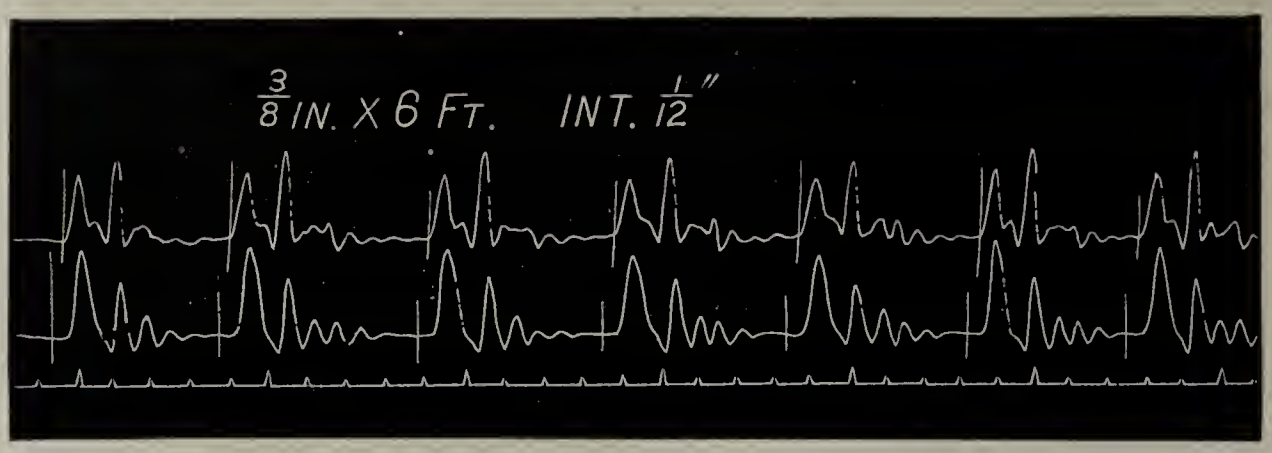


FIG. 10.—Tube 3-8 inch, 6 feet long; int. 1-12 sec. Compares with figure 3.

Reviewing these experiments it is shown, the modifying influence of different pressures is small at best, and requires for development considerable difference of pressure in tubes very soft and elastic. The thin rubber tubes, delicate as they were, failed to make manifest any difference in velocity, while the animal tubes, although with thicker parietes, really more easily yielding, showed increased velocity coincident with marked increases of pressure.

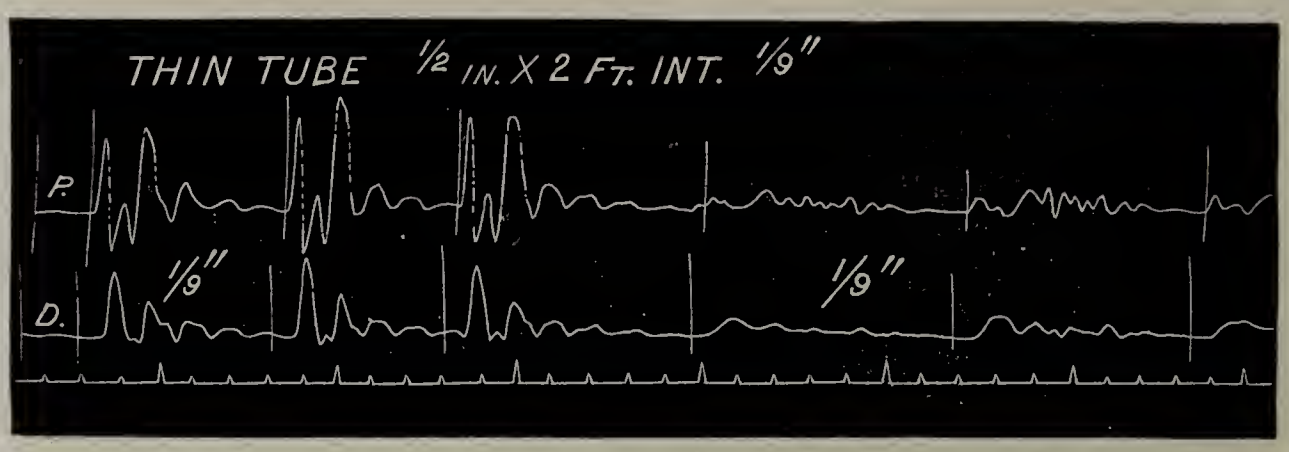


FIG. 11.—Thin tube 1-2 inch diameter, 2 feet long: int. 1-9 sec. Compares with figure 6.

These results have an important relation to the question of influence of blood-pressure on pulse-wave velocity. They indicate that variation of blood-pressure tends to produce variation of pulse-wave velocity directly as the pressure; but in such pressure changes as occur in the organism and mixture of modifying agencies with which they act, it would be expected, in view of these results, that such effect would be of uncertain manifestation and slight when

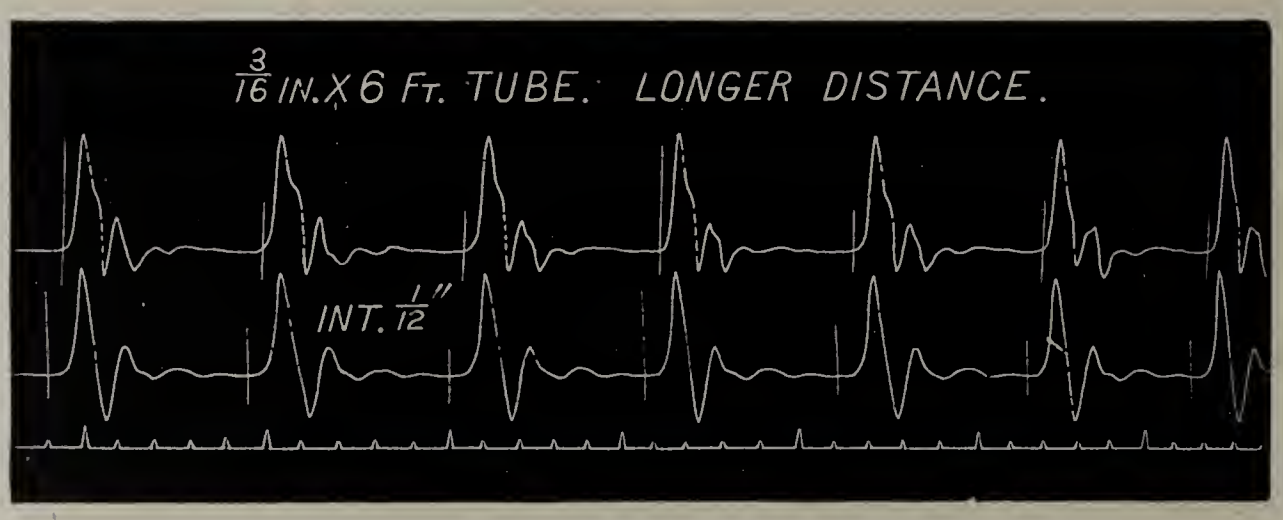


FIG. 12.—Longer distance from pump; int. 1-12 sec. Compares with figure 3.

Fourth experiment:—Thin 1/2 inch rubber tube, at different pressures. Fig. 14 gives the result.

Showing again negative, the time-difference measuring uniformly 1-9 second at 4, 20, and 30 inches pressure, while at 40 inches the interval is really a little longer.

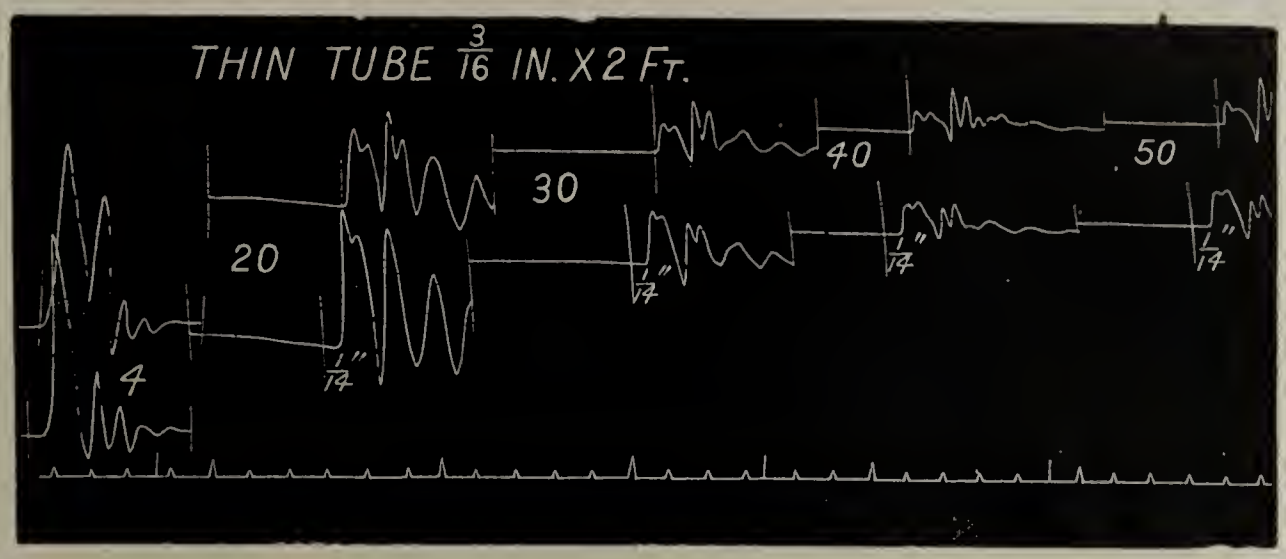


FIG. 13 —3-16 inch thin tube, at increasing pressures; showing negative result.

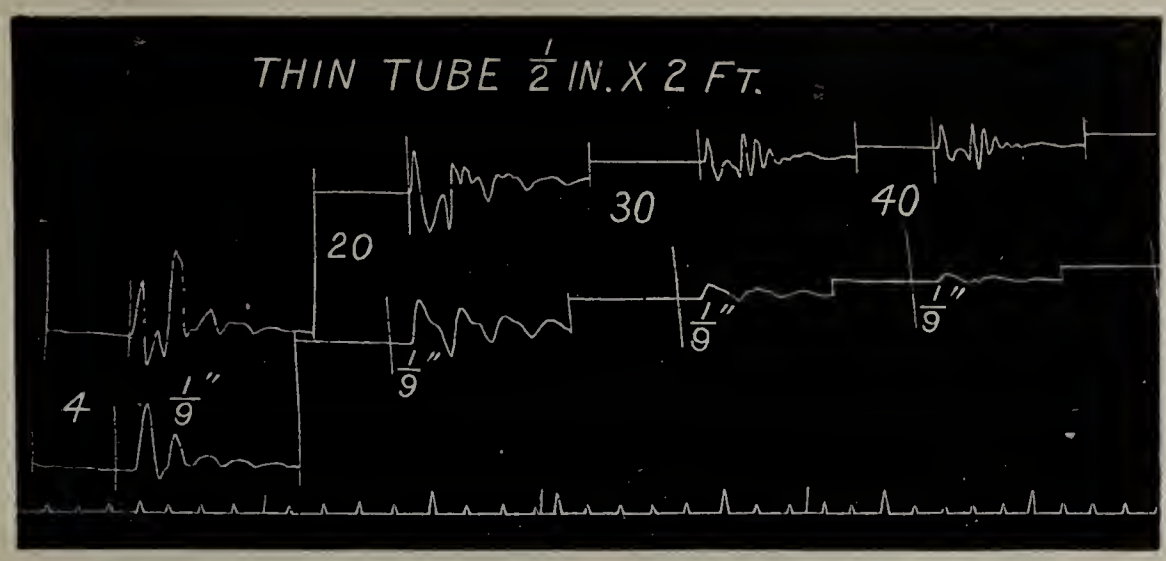


FIG. 14.—1-2 inch thin tube, at different pressures; showing negative result.

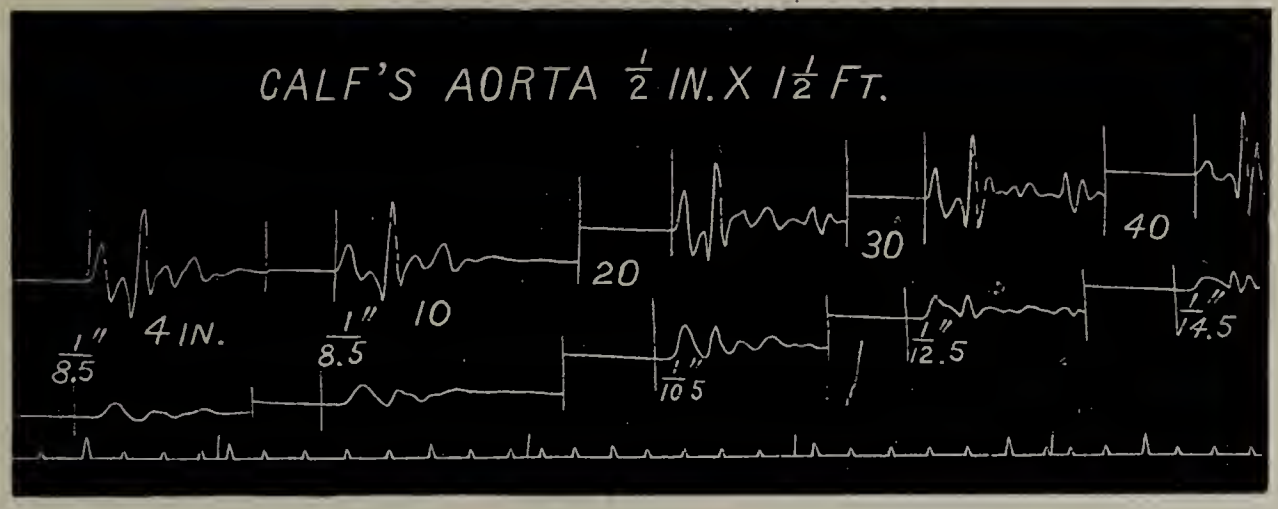


FIG. 15.—Calf's aorta, at different pressures; showing swifter velocity with higher pressure.

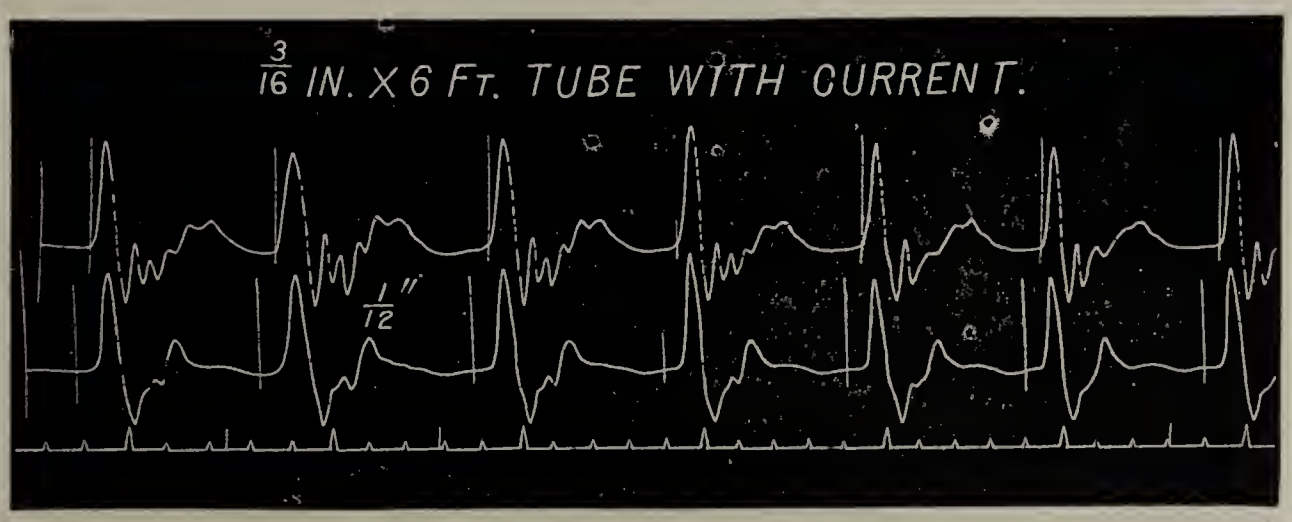


FIG. 16.—3-16 inch 6-feet tube, with a current; showing negative effect.

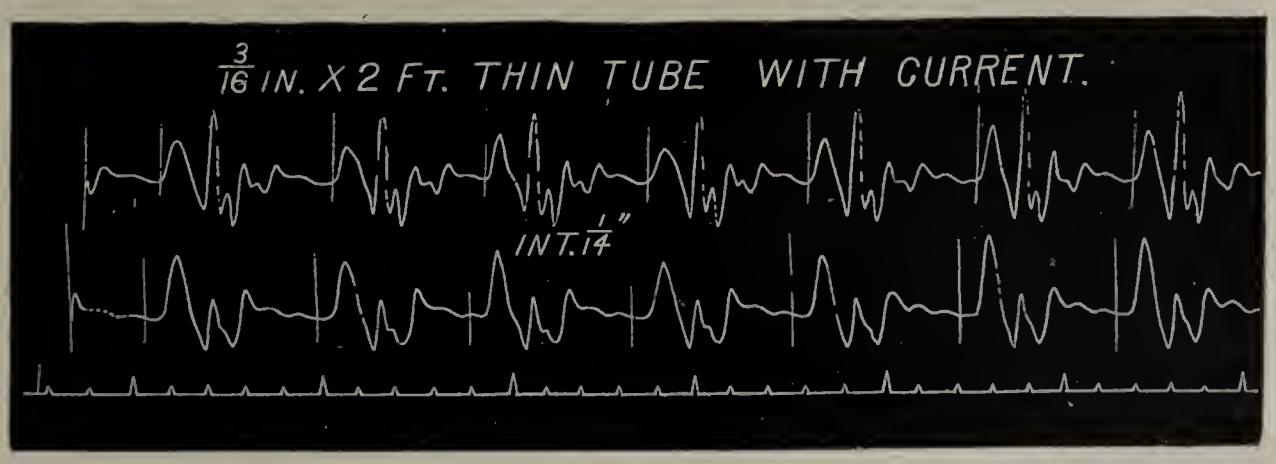


FIG. 17.—Thin 3-16 ineh 2-feet tube, under a current; showing negative result.

observed. According to these experiments the current teaching on this point requires modification.

PROBLEM VI.—To determine whether the velocity of liquid waves in elastic tubes is modified by rapidity of current through the tubes.

Hitherto our experiments have been made with the liquid at rest in the tubes, except as sent forwards at each impulsion of the pump. To test the effect of a continuous current on the velocity of waves implanted upon it, the reservoir was elevated thirty-six inches (the supply tube lengthened accordingly), and the distal tube left to discharge freely into a vessel on the table below; and, whilst thus the water was flowing rapidly through the tube, the experiment was made. Fig. 16 gives the result with the 3-16 inch six-feet elastic tube. The time difference, 1-12 second, is the same as that of figure 3, given by the same tube with the liquid at rest.

Fig. 17 is the result of a parallel experiment with the 3-16 inch 2-feet thin rubber tube. This compares with Fig. 6, given by the same tube with the liquid at rest. It will be observed that the time differences are the same, viz., 1-14 second.

Liquid waves, then, travel along elastic tubes with the same speed, whether the liquid be at rest or freely flowing.

By this we may know that, whether the blood in the arteries flows fast or slow, the velocity of the pulse-wave is not affected.

PROBLEM VII.—To determine whether the velocity of liquid waves in elastic tubes is modified by branches issuing therefrom.

Two rubber tubes, each ⅛ inch bore and 6 feet long, were branched on the 3-16 inch 6 feet tube a few inches below the upper receiver, their distal ends turned into the reservoir. Traces of the waves were then taken with the result shown in Fig. 18, which signals a negative effect.

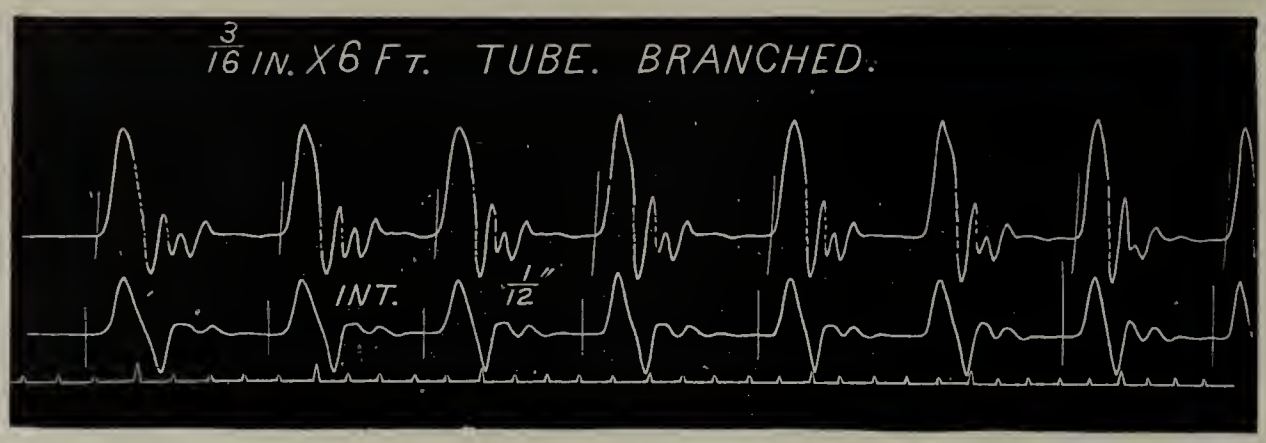


FIG. 18.—Showiug negative effect of branches on main tube.

Again, the 3-16 inch 6 feet tube was branched on the chicken's intestine, and Fig. 19 obtained at 10 in. pressure, the first part without, the second part with, communication with the branch. It will be seen that the effect is again negative, the intervals measuring 1-10 second under both conditions.

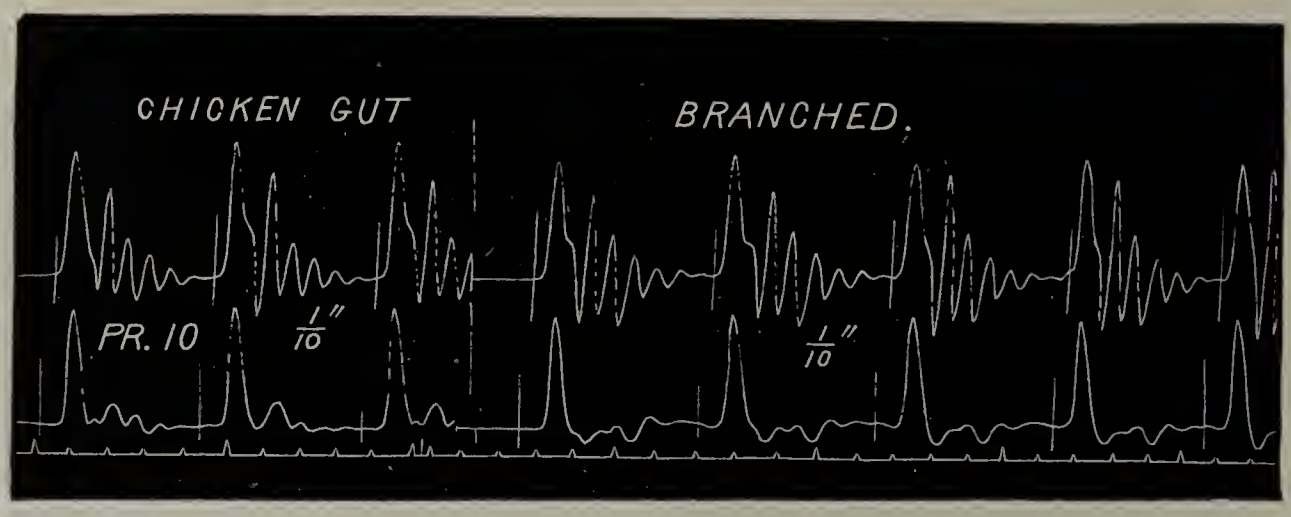


FIG. 19.—Chicken gut, with branch; showing negative effect.

In application of this experiment, in seeking to determine the cause of different rates of pulse-propagation for different articles, we may now exclude as of no effect the different conditions as to branches.

PROBLEM VIII. To determine whether the velocity of liquid waves in elastic tubes is modified by the consistence of the liquid.



FIG. 20.—3-16 inch 6-feet tube, with solution of starch; negative result.

A solution of boiled starch, as thick as would flow through the tubes, was substituted for water, and experiments made as with water. Fig. 20 shows the result with the 3-16 inch 6 feet tube, comparable with Fig. 3; and Fig. 21 shows the result with the chicken gut, which is comparable with Fig. 7. Results negative.

From this experimentation we learn that waves are delayed by great obstruction of the tube, and that the delay occurs at the point of obstruction, and is not caused by lessening of the rate of transmission below.

The bearing of these facts upon the influence of arterial obstruction in modifying the time of the

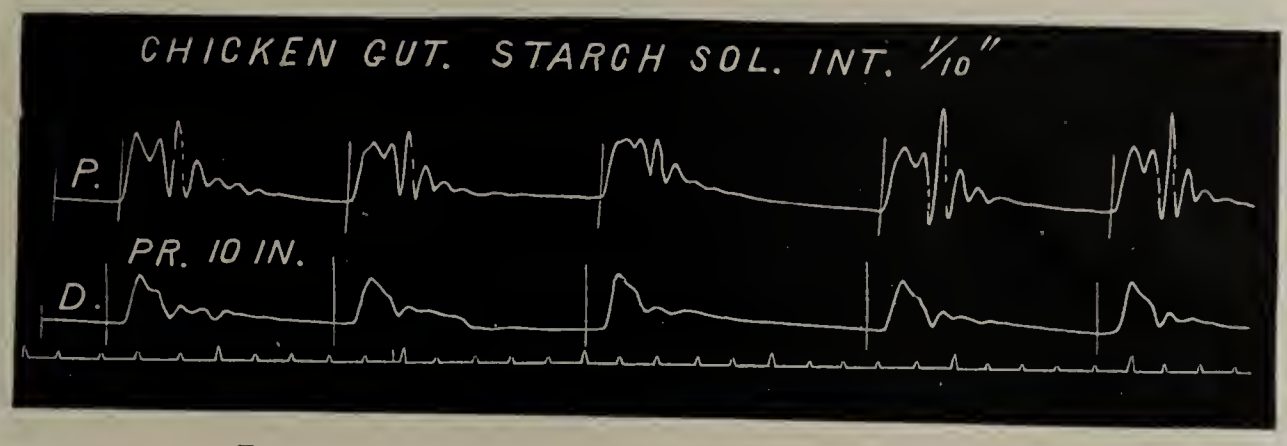


FIG. 21.—Chicken gut, with solution of starch · negative result.

This fact teaches that whether the blood be dense or watery, the pulse wave velocity is all the same.

PROBLEM IX. To determine the effect of obstruction of the tube on the time of the wave below the obstruction.

In Fig. 22, with the 3-16 inch thin tube, the waves

pulse wave, is at once apparent.

PROBLEM X. To determine the effect of an elastic pouch communicating with the tube, as an aneurism with an artery, on the time of the wave below the pouch.

A thin rubber bag, easily distensible, was placed in

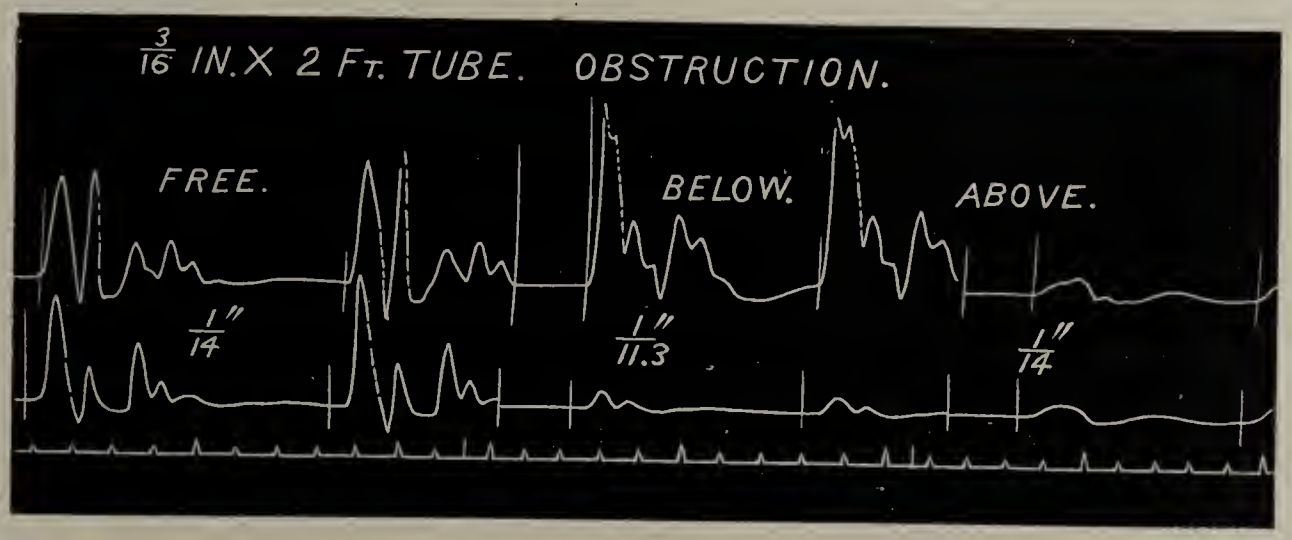


FIG. 22.—3-16 inch thin tube; showing the effect af obstruction of the tube.

were traced first under the usual conditions, and then, whilst the tube was compressed just below the upper receiver, and then again just above. The measurements are 1-14 seconds with tube free, 1-11.3 seconds with obstruction below, and 1-14 second with obstruction above, the receiver. These fairly represent the results of many similar experiments. The delay is small, but always discernable when the passage of the liquid is greatly obstructed below the near receiver. Obstruction above never causes delay. Also, we found the same result when the obstruction was created by plugging the tube so as to leave a very small aperture for passage of the liquid.

relation with the 3-16 inch 6 foot tube, so that communication between it and the tube could be opened or closed at will. Tracings were then taken, first with the sack shut off, and next with the sack in free communication. Fig. 23 shows the result. The retardation is sufficiently striking.

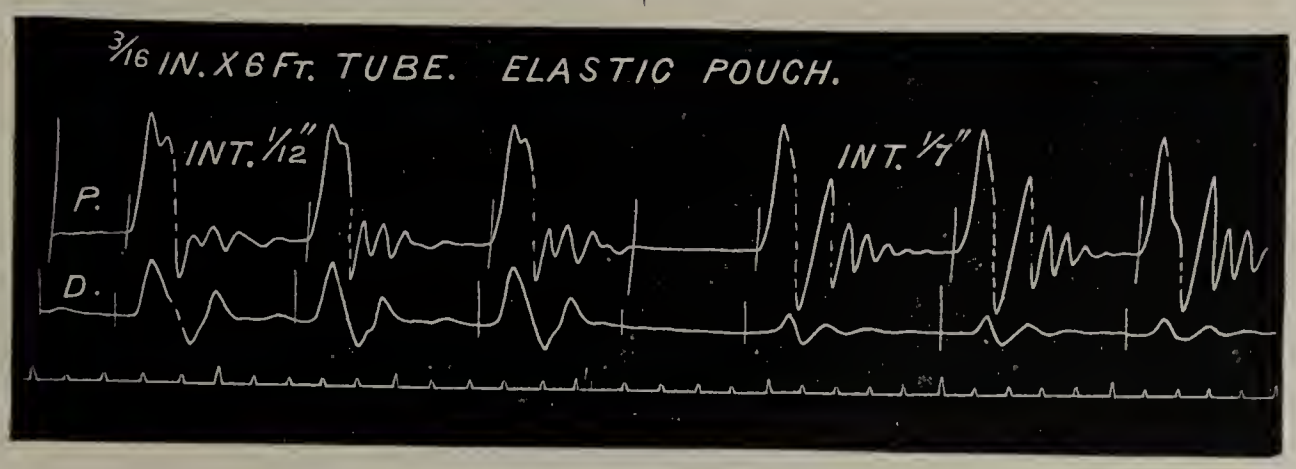


FIG. 23.—3-16 inch 6-feet tube, with elastic pouch.

Next the pouch was placed in the same manner in relation with the chicken-gut, and the experiment proceeded with in the same way. Fig. 24 shows the result, which is negative as to delay.

Again, the pouch was associated with the 3-16 inch thin tube, and in continuity, instead of by lateral

communication ; and to make the experiments strictly comparable a section of the same tubing of the same length as the pouch was interposed for the normal experiment, and that with the pouch above the receiver. First, the pouch was placed closely above the upper receiver and traces obtained shown in the first part of figure 25 ; next, it was removed and, the original connection having been restored, the middle part was obtained ; third, it was placed immediately below the receiver (the section of tube having been removed), and the latter part obtained.

It will be noticed that the interval with the sack above the receiver, and that under normal conditions,[1] without the sack, measure the same ; while that with the sack below the receiver is considerably longer.

In the first experiment the pouch was notably more distensible than the tube and so absorbed the wave to the extent of delaying its time of appearance at the lower receiver ; while in the second experiment the contrast in yieldingness between the pouch and gut was not great, and so no retarding effect was contributed.

The third experiment demonstrates that the wave-delay incident to an elastic pouch begins and ends at the pouch, and that the wave which passes through travels on with undiminished velocity. It shows also in connection with the others that the retarding effect is more easily produced by a sack in continuity than by one with lateral connection.

We appreciate the significance of these facts in their bearing upon the subject of delay of the pulse produced by aneurism.

Having thus experimentally investigated the problems that seemed most pertinent to this branch of our subject, and given somewhat in detail the experiments and results relating thereto, the following resumé of the facts arrived at will now be in order :

1. The velocity of liquid waves along the interior of elastic tubes is proportional directly to the stiffness, inversely to the elasticity of the tube traversed.

2. It is not sensibly modified by the mode of impulsion, a quick wave and a slow wave being transmitted along the same tube in equal times.

3. It is proportional inversely to the largeness of the tube.

4. It is not sensibly modified by different distances from the pump.

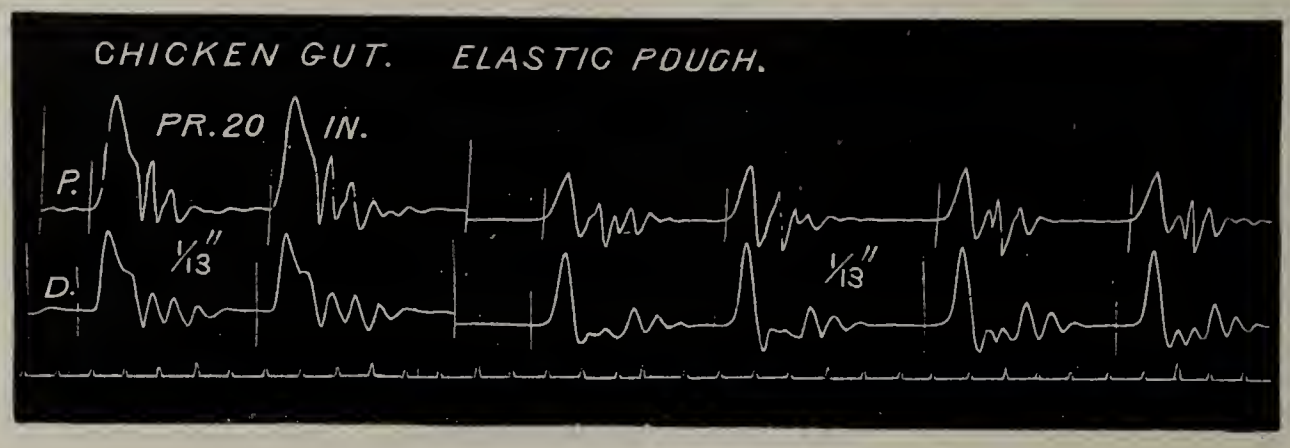


FIG. 24 —Chicken gut, with elastic pouch.

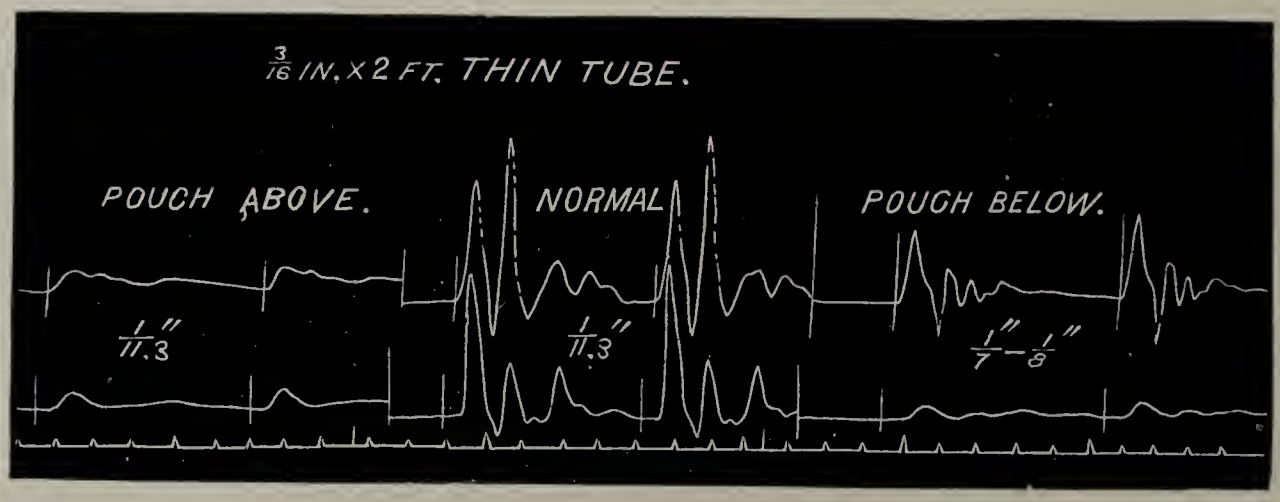


FIG 25 —Thin 3-16 inch tube, with elastic pouch in different positions

5. It increases with increase of pressure of the liquid in very soft yielding tubes, but in all other elastic tubes, it shows no modification.

6. It is not modified by rapidity of current through the tube.

7. It is not modified by branches connected with the main tube.

8. It is not modified by liquids of different consistance.

9. The distal wave is notably delayed by obstruction of the tube, although its velocity of propagation is not appreciably diminished thereby.

10. The distal wave is delayed by communication with an elastic pouch more easily distensible than the tube, while if the pouch and tube are nearly equally yielding, there is no increased delay ; yet the velocity of the distal wave is not perceptibly diminished from this cause. Hence,

11. The increased delay of the distal wave in arterial obstruction and distensible pouch arises from arrest at the site of obstruction and site of the yielding pouch.

[1]The longer normal interval than those before shown for the same tube is attributed partly to the length of the tube having been increased by so much as the sack and its connections would increase it, and partly to relaxation of the tube from use and soaking in water.

DR. PARRISH'S CASE OF THE PORRO-MÜLLER OPERATION.

The following is the full report of the case discussed in the proceedings of the Obstetrical Society of Philadelphia given in another part of the JOURNAL as furnished by the Secretary of the Society.—[ED.]

SALLIE SMITH, a deformed dwarf, applied for admission to the Philadelphia Hospital in April, 1883. One of the internes placed her among the pauper women of the out-wards of the almshouse. There, all the conditions surrounding the dwarf were such as to contribute to her physical deterioration. The women in that part of the institution are unduly crowded—the ventilation is entirely inadequate, and the food of a character unfit for a pregnant woman. Her presence in those wards was unknown to any of the visiting obstetricians of the hospital until June 15, when Dr. Pauline Root, one of the internes, ascertaining her pregnancy and surroundings, conveyed the information to me. I at once had her transferred to the obstetric wards where she was especially provided for and her condition carefully investigated. She was a native of Philadelphia. She was unable to give her age—although dwarfs usually appear to be older than they actually are, yet from what could be learned of her past life, from evident atheroma of her blood-vessels and from her appearance, I concluded that she must be over forty years of age. Her parents were poor, were born in Ireland, and died in this city during her early infancy. She had been told that her father died of heart disease, and her mother of insanity at the menopause. She did not know how or by whom she was cared for in her early childhood. She attributed her deformities to a fall supposed to have been received when she was a very small child. She was unable to walk until she was seven years of age. Her occupation, from the time she was first able to work, has been that of a house servant. Menstruation began at sixteen years, continued at the usual periods, but rather profusely until the beginning of pregnancy.

She could not recollect ever having been seriously ill. I learned from some of her acquaintances that for a number of years she had been of intemperate habits, repeatedly becoming intoxicated, and indulging in promiscuous sexual intercourse. Her bad habits led to exposure to inclement weather, and, with the influence of cold and damp, doubtless led to the diséase of the kidneys, to which I shall again refer.

She was pregnant for the first time. The date of the last menstruation was given by her differently at different times. At one time she would give the 1st of October, and another time, the middle of October as the date when menstruation last ceased.

She felt movement of the child about the middle of February, though she was also uncertain in reference to the date. The *fundus uteri* reached néarly to the ensiform cartilage, and I concluded that the full period of pregnancy would be attained about the 10th or 15th of July,

She was fifty-one inches high, the head small, mind sluggish, and memory defective; yet she was not an imbecile. The clavicles and bones of the upper extremities, though small, presented no special deformities; they did not show the usual rachitic incurvations. The right thorax was very prominent posteriorly and laterally; the left thorax markedly depressed posteriorly and laterally. Both lungs, but more especially the left one, were greatly encroached upon by the deformed thoracic walls. The heart was displaced upward and to the left, its apex being on a level with and external to the left nipple. Pulse 86, of good volume, but intermittent. Bowels moved daily; urination frequent. Urine contained one-quarter albumen, and also granular and hyaline tube-casts. The eyelids were slightly œdematous, but œdema was not recognizable in any other part of the body. The patient complained of frequently recurring frontal headache. At times things seemed darkened to her, and dark specks appeared before the eyes. She had never experienced convulsions, but occasionally had slight fainting attacks.

The vertebral column was markedly curved. The upper third of the dorsal region was slightly convex posteriorly, the lower two-thirds markedly convex posteriorly and also decidedly convex to the right. The lumbar portion was convex anteriorly and to the left. A left anterior lumbar convexity, compensating for a right posterior convexity of the dorsal region. In the erect position, the lower ribs and the crests of the ilia seemed in contact, and the left iliac crest about one inch higher than the right. Posteriorly there was a deep depression at the sacro-vertebral articulation, and the posterior-superior spines were unduly approximated. Externally examined, the sacrum, in its upper two-thirds, seemed directed nearly horizontally backwards.

External measurements with a pelvimeter showed about fifteen centimeters or six inches between the posterior surface of the top of the sacrum and the anterior surface of the top of the symphysis pubis. Normally this measurement is about eight inches. Deducting three inches from the external conjugate of six inches, would have made the internal or true conjugate three inches. The distance between the anterior-superior spines measured twenty-five centimeters, or about ten inches, the normal being ten and one-quarter inches. Between the normally widest portion of the crests of the ilia the distance was a little less than that between the anterior spines—that is, a little less than ten inches, the normal being eleven and one-half inches. The measurement between the crests being less than that between the spines, indicating the pelvis to be rachitic, though it will be seen that the pelvis was not the more usual, typical rachitic one. The external measurements did not indicate decided transverse narrowing of the true pelvis, though internal manual examination did show decided transverse narrowing.

Repeated internal examination showed the promontory to be jutting forward, and the anterior surface of the sacrum to be nearly straight, and directed almost horizontally backward. The symphysis pubis was correspondingly inclined downward and backward.

The oblique conjugate measured three and one-fourth inches, the depth of the symphysis pubis one and a half inches; hence, according to Lusk, deducting three-fourths of an inch from the oblique conjugate, I estimated the true conjugate to be two and a half inches. The transverse diameter of the superior strait was evidently considerably shortened, but I could not satisfactorily determine the degree of the shortening. The antero-posterior diameter of the excavation was taken to be less than the corresponding diameter of the superior strait, and all the measurements of the outlet less than the corresponding ones of the superior strait. The pelvis was diagnosed to be a generally contracted one, with proportionally greater diminution of the conjugates, and the general contraction increasing from above downward, so as to produce a somewhat funnel-shaped pelvis. The vaginal canal was narrow, and the os uteri high up, and the uterine fundus markedly tilted forward. The abdomen was remarkably pendulous.

When the patient first came under our observation, pregnancy seemed to have reached about the end of the ninth lunar month, according to the most probable interpretation of the symptoms, and of the information she gave. The question arose, would it be best to produce a premature labor at the end of the ninth month, with a generally contracted pelvis, and a true conjugate of two and a half or two and three-quarter inches? I decided that should a premature labor be attempted under such circumstances, craniotomy, or some other similarly dangerous operation, would be eventually necessitated, and that the dangers of such operation would be increased by the addition of those incident to the production of premature labor. Delivery with forceps, or by podalic version, seemed out of the question. There was a choice between craniotomy, symphysiotomy, Cæsarian operation, gastro-elytrotomy, and the Porro operation.

In such a pelvis, craniotomy would have been difficult and tardy, and has been shown, especially by Parry, to be attended with a mortality of mothers too large to compete with abdominal section.

I did not prefer the Cæsarian operation, because of its excessive mortality to mothers in European hospitals, and because of the six Cæsarian operations performed in hospitals in this country, all were fatal to the mothers. A condition almost essential to recovery after Cæsarian operation is rarely met with, even after normal deliveries, in hospitals. I refer to sufficient retraction of the uterus. A flabby uterus, after a Cæsarian operation, leads to blood-poisoning and to general peritonitis. The experience of many hospitals, as also *à priori* reasoning, would make the Cæsarian operation of very questionable justification in hospitals, especially in large maternities, and more decidedly still in general hospitals. The Philadelphia Hospital is not only a general hospital, but is also part of a large almshouse. Gastroelytrotomy and symphysiotomy have given good results in the hands of a few operators, the former especially in America, the latter in Europe; but both operations have been performed with comparative infrequency, and the question of their respective merits cannot be determined by the very limited number thus far performed.

I do not desire to discuss *in extenso* here the general question of the relative value of the different operations performed for the relief of advanced pregnancy in very small pelvis. Among the considerations inducing me to adopt the Porro operation, with Müller's modification, were, the smaller mortality to mothers attending this operation in hospitals, and the opportunity it allows the operator of selecting daylight, and of securing the needed assistants.

The patient was placed under the influence of quinine, of Basham's mixture, and of occasional doses of the compound jalap powder. Woollen underwear and proper diet were secured for her. She was isolated from all lying-in women. Her condition did not improve, however, as the time for operation approached, but on the reverse, a persistent œdema of the face, more troublesome headache, and more marked disturbance of vision, with an increasing quantity of albumen in the urine, all pointed to steadily increasing uræmia. The time chosen for the operation was what was supposed to be the end of the thirty-eighth week of pregnancy. A large, well-lighted, well-ventilated room in the Children's Asylum, remote from the obstetric wards, and one that had for years been used as a private parlor, was selected in which to operate, and in which the patient was to remain after the operation. This room was divested of curtains, carpets, and furniture; its walls and floor were thoroughly scrubbed with carbolized water. The room was then refurnished with chair, table, and a new bed. In short, every means was resorted to to improve, as far as possible, the unfavorable conditions incident to so large an institution as the Philadelphia Almshouse.

The members of the obstetric staff had agreed with me in the diagnosis of the patient's deformities, and also as to the propriety of the performance of a Porro-Müller operation. The patient was also kindly examined prior to the operation by Drs. Albert H. Smith, Robert Harris, M. O'Hara, and Anna Broomall. After receiving a full explanation of the nature of the operation, the patient gave her entire consent. The operation was performed on June 30, 1883, with the assistance of Drs. Duer, Keating, Musser, Stryker, Montgomery, Clara Marshall, and Bernardy, all members of the obstetrical staff, and also with the assistance of Dr. McLoughlin, warden of the hospital. There were present Drs. S. D. and S. W. Gross, Ellwood Wilson, J. L. Ludlow, Albert H. Smith, Anna Bromall, J. H. Brinton, Hannah Croasdale, and other physicians. On the morning of the operation the room was carbolized with the spray, but the latter was not used during the operation. All instruments were kept in a two per cent. carbolized solution, and Listerism, minus the spray over the patient was in the different details observed. On the morning of the operation the patient received a general bath, and the bowels were moved by enema. A half hour before the operation she received two ounces of whisky. Dr. Joseph Hearn, one of the surgeons of the hospital,

and an experienced anæsthetizer, kindly administered ether during the operation. After etherization the bladder was emptied with the catheter. An incision was then made in the median line of the abdomen 7 inches in length, extending from two inches above the symphysis pubis to about one inch above the umbilicus, passing to the left of the umbilicus. The slight bleeding from the lips of the abdominal incision was controlled by artery compressors before opening into the peritoneal cavity. The absence of intestine from in front of the uterus was ascertained by percussion before making the incision. The uterus was easily raised from the abdominal cavity.

Owing to the anterior lumbar curvature, and to the length of the incision, it was impossible to completely prevent the escape of intestines. After the uterus had been turned out, a protector made of two layers of flannel, with an intervening layer of protective silk, was placed over the abdomen; the object being to avoid chilling, and to prevent the escape of blood and other fluids into the peritoneal cavity. This protector, when used, was wrung from a warm carbolized solution. The next step was to place around the cervix the wire of an écraseur, and to constrict the tissues in its grasp to such an extent as to stop all circulation of blood through the uterus without cutting through the peritonæum. This step required speed, care and judgment. The liability of a loop of intestine or of omentum to be caught by the constricting wire had to be carefully guarded against. Immediately that sufficient constriction had been secured, a short incision was made with a pointed bistoury through the antero-uterine wall down to the placenta, for the placenta proved to be attached anteriorly. The incision was then rapidly extended from near the neck to the fundus, with a probe-pointed bistuory, guided by two fingers of the left hand introduced into the incision. The blood pent up in the uterus by the constricting wire escaped freely, but did not enter the abdominal cavity. The incision passed to the external surface of, but not through, the placenta. The hand was immediately introduced into the uterus through the exposed membranes at the fundus, and the child quickly turned out, the placenta being in this manœvure detached in main from the uterus. The cord was promptly tied and cut, and the child handed to Dr. Keating. It was asphyxiated when delivered, and presented a very unpromising appearance.

It, however, quickly breathed and cried under the efforts of Dr. Keating at resuscitation. The rapid resuscitation was effected by alternately dipping the child in basins of hot and of cold water. After removing the infant, the uterus, with both ovaries and both tubes, was amputated a half-inch above the constricting wire—this point was about at the internal os. It was then seen that the wire had completely controlled the circulation, and not a drop of blood escaped from the stump of the uterus.

The next step consisted in passing obliquely through the stump two steel pins five inches in length, one above, the other below, the wire. After this a strong carbolized silken cord was passed around the stump, in the line of the wire, and partly tightened. The wire was then cut and removed, and the silk cord very firmly tightened and securely tied. Special care was given to the tightening of this cord and to the tying of a secure knot. The ends of the pins rested laterally on the abdominal walls, and under the ends, on each side, was placed a piece of sheet-lead. The stump was thus secured outside of the abdominal cavity, and rested at the lower angle of the wound. New carbolized sponges on handles were introduced into the peritoneal cavity, down into Douglas's pouch, but the entire cavity was free from blood or other fluid.

The abdominal wound was then closed by deep and superficial silver sutures. The deep ones were introduced so as to include the peritonæum. During the introduction of the deep sutures, flat carbolized sponges were introduced beneath the incision, so as to catch what oozing might occur from the needle punctures. The external portion of the uterine stump was brushed over with carbolic acid, and then invested with lint saturated with carbolized oil. A strip, two inches wide, of dry carbolized lint was placed on the incision; over this a few strips of rubber adhesive plaster were applied transversely, over these a thick layer of carbolized cotton, and over all a flannel binder. The patient was put to bed and surrounded with pans of hot water. Dr. Montgomery took charge of the patient's general condition during the operation, and administered during its performance four hypodermic syringefuls of whisky. He reports that the time taken up in the operation, from the beginning of the abdominal incision until its complete closure, occupied forty minutes. During the operation the pulse ranged from 100 to 128, the greater frequency being during the making of the incision in the abdominal wall, and was probably due to impeded respiration. The constriction of the cervix had no appreciable effect upon the pulse. Soon after being put to bed, the pulse was 132, but in two hours was 108 per minute, and of good volume. The respirations during the anæsthesia became disturbed and imperfect, producing considerable cyanosis, and probably causing increased frequency of the heart's action.

The patient rallied well, as was shown by return to consciousness, by bodily warmth, and a fair pulse. For about sixteen hours her condition seemed very favorable, excepting that the kidneys had ceased to act. At the end of twenty-three hours there was marked change for the worse; the mind wandering, pulse 140, temperature 100° F. An inspection of the dressing at that time, showed some oozing from the stump—perhaps six ounces—but it had then stopped. An additional ligature was placed around the stump, and one of the uterine arteries was separately ligated, the other could not be found; the stump was also brushed over with Monsel's solution. There was no subsequent oozing. That there should have been any loss of blood in this manner was a surprise to me, as the original ligature was so very firmly tightened and secured, and had for a number of hours after reaction so perfectly controlled all bleeding. There was marked atheroma of the vessels

of the stump, as was revealed *post-mortem*. After the twenty-third hour the patient grew progressively worse, became uncontrollable and delirious, had convulsive manifestations, and died in coma. There was no vomiting until twenty-six hours after the operation, and it recurred only once. She experienced but slight pain, and sulphate of morphia was given in slight quantity — ¼ gr. hypodermically, soon after the operation; again ⅙ gr. at the end of eleven hours — and subsequently about the thirty-sixth hour, because of the great jactitation and the difficulty of keeping the patient in bed. The morphine was given hypodermically by Dr. McLoughlin in such small amount that the coma could not have been due to it. Eight hours after being put to bed the urine was drawn with the catheter. Subsequently the catheter was introduced at different intervals, but on each occasion the bladder was empty, and it was also found empty at the *post-mortem* examination. Only three ounces of urine were secreted after the operation. The patient survived forty-two hours.

Dr. John Gillispie made a careful analysis and microscopic examination of the urine secreted after the operation, with the following report:

The specimen of urine from the woman upon whom the modified Porro operation was performed was examined, with the following result:

The specific gravity was 1023; reaction decidedly acid. The urine was of a dirty, yellowish brown color, and contained a large amount of albumen (rather more than one-third).

The amount of urea contained in the urine received by me was 10.5 gr. for the entire amount. Therefore, if only three ounces of urine were excreted in forty-two hours, the total amount of urea excreted would be about fifteen grains.

The sediment contained granular, hyaline, and epithelial casts, renal and bladder epithelium, and granular detritus and blood-corpuscles.

Dr. Wile, the acting pathologist of the hospital, conducted the *autopsy*, and I extract the following from the pathologist's records:

On opening abdominal cavity several slight adhesions were found between the visceral and parietal peritonæum in the region of the surgical incision. Blood-vessels around incision markedly congested. No exudation or other evidences of general peritonitis.

Stomach and intestines distended with gas; spleen small, atrophic.

Left kidney: Considerable displacement, found between sixth and seventh ribs. Somewhat lobular, on surface pea-sized cyst, which extends somewhat into the cortical substance of kidney. Cortex reduced, the seat of parenchymatous, solid, interstitial change.

Right kidney: Position normal; shape altered, considerable flattening on upper surface; hilus very marked; capsule adherent, seat of parenchymatous change. Both kidneys in state of contraction.

Pelvis: One ounce of bloody serum in Douglas's pouch. Peritoneal and subperitoneal tissue the seat of considerable œdema.

Veins around vagina enlarged.

Cervix uteri virginal; orifice round.

Liver enlarged; fatty.

Thorax: On left upper anterior side pleura adherent.

Heart: Left side firmly contracted; right relaxed. Right auricle and ventricle seat of a firmly adherent chicken-fat clot. Left ventricle contained small amount of dark, slightly coagulated blood. Left ventricle markedly hypertrophied. Mitral valve, slight thickening. Papillary muscle considerably hypertrophied.

Lungs: Hypostatic congestion; œdematous.

Cause of death: Heart-clot.

Report of histological appearance of kidney. H. Wile, M.D.

The blood-vessels are for the most part congested, filled with corpuscles, and surrounded by a growth of connective tissue. The uriniferous tubules are found filled with cellular and granular debris. Some contain pigment, the result of slight hæmorrhages. The epithelium lining of the tubules is granular, and in some places in a state of proliferation, indicating a catarrhal process. The growth of connective tissue between the tubules and about the Malpighian bodies is more marked in some places than in others, and the interstitial process may be regarded as fairly established.

A careful measurement was made by Dr. S. D. Lazarus and myself after the pelvic viscera had been removed, with the following result:

Superior strait, ... 3 inches

Conjugate.....

Transverse,..... 4 "
Right oblique, ... 3¾ "
Left oblique, ... 4 "

Oblique conjugate, ... 3¼ "
Depth of symphysis,..... 1½ "

Obstetrical conjugate, ... 2¾ "

Excavation:
Conjugate, ... 2¾ "
Transverse, ... 4 "

Upper four sacral vetebræ directed nearly horizontally backward; lower portion of sacrum and coccyx curved sharply forward.

Inferior strait:
Conjugate, ... 2½ inches.
Oblique,..... 2¾ "
Transverse, ... 3½ "

A perpendicular to plane of superior strait is nearly horizontal, striking the abdominal wall about midway between umbilicus and top of symphysis.

A perpendicular to plane of inferior strait would strike the upper part of the third sacral vertebra.

The death of the dwarf must be attributed chiefly to the existence of interstitial and parenchymatous nephritis. She had rallied from the shock of the operation. There was no peritonitis, excepting in the immediate vicinity of the incision.

It was too early for septic poisoning to produce death, and there were no indications that such had occurred. The loss of blood had been trifling, and death occurred too soon to be attributable to exhaustion from this cause.

The acute and almost complete suppression of urine, the symptoms after the operation, the symptoms prior to the operation, and the results of examination of the urine and of the kidneys after death, all pointed to the diseased kidneys as the cause of the fatal result to the mother.

It is well to note that union had occurred throughout the entire extent of the abdominal wound. There were adhesions between the small intestines and the parietal peritonæum along the line of incision. The latter fact is of interest, viewed in the light of death in a few instances after laparotomy being attributed to strangulation of the bowel, due to constricting inflammatory bands.

The child was of small size, and died at the end of three weeks, of inanition.

THE SICKNESS OF THE COUNT OF CHAMBORD.

BY A. CHEVALLEREAU.

(From *La France Médicale*. Translated by Chas. H. Hunt, M.D., Stanwood, Iowa.)

Prof. Vulpian, who was called to Frohsdorf during the last sickness of the Count of Chambord, has published in the *Gazette-Hebdomadaire* an account of the sickness, and the reflections on the case with which he was inspired. The affection, which was the death of the Prince, does not resemble anything that can happen to simple mortals; in no classical literature do we find anything near it.

It is this that appears interesting on viewing the principle phrases and following the very remarkable deductions that he has made.

Since two or three years, at the least, the health of the Count of Chambord, which up to that time had been excellent, commenced to change. The Count, however, each day pursued during the greater part of the year the pleasures of the chase, and in spite of an ancient fracture of the neck of the left femur that had produced a shortening and a certain degree of atrophy of the inferior member; in spite considerable development of adipose tissue, he supported better than his younger companions the fatigues of the chase in the mountains.

During some four or five years previous, pressed by the need of diminishing his embonpoint, he was submitted to the system of Banting in all its rigor, and then in a few months he lost fifty pounds of his weight, but at the same time he felt a feebleness and perhaps some digestive troubles. Since this epoch he had been on two occasions seized with intense dyspepsia.

In the month of June, 1882, he made at Marienbad a new essay to diminish his adipose tissue, and against rheumatism, from which he had suffered two or three years previous. He then had some gastric troubles which were considered grave, and which forced him to restrain, in a measure, the medication of Marienbad. The 22d of March last, while at Goritz, the Prince in mounting a carriage was suddenly taken in the superior and external part of the right leg with a sharp pain which was called by the physician "a whip lash," (coup de fouet) and which was attributed to a rupture of the plantaris muscle, or to a phelebitis. The pain after having persisted during many weeks disappeared, and on the 20th of May he returned to Frohsdorf; he weighed the day after 208 pounds.

Such is the history that M. Vulpian gathered regarding the last sickness.

Now comes the history of the strawberries which many political journals have siezed upon to base a case of poisoning. The 13th of last June, the Count ate some strawberries for his dinner which had begun to spoil. The next day he had a slight indigestion with vomiting and diarrhœa. The 15th he was much better and took some fruit for dinner with his friends, and had a new attack of indigestion the day after, but this time with great intensity.

The appetite was altogether lost, and nausea was followed by vomiting, which was repeated a great number of times. He manifested great abdominal pain which was exasperated by the ingestion of aliments or drinks. The symptoms became more and more violent up to June 19th, the day that the Count decided to call Dr. Mayr, Physician of the Hospital of Neuftadt. Weighed the same day; the Count had lost since May 21st twenty pounds of his weight; the following days grew more agravating.

Toward the 24th or 25th of June, Dr. Mayr, who made an examination of the abdomen each day, believed that he recognized the existence of a resisting tumor in the epigastric region, at the right of the median line. There could be seen at the surface of the abdomen in this region a rounded projection.

The 27th of June a consultation was held between Prof. Drasche, of Vienna, and M. Mayr. Both admitted the probability of the existence of a tumor in the region of the stomach; however, they desired to have recourse to the experience of Prof. Billroth, who came with them the 29th. Billroth hesitated between three hypotheses—an affection of the liver, a gouty gastritis, or a cancer of the stomach.

The patient continued to suffer cruelly, and vomited a great number of times in the twenty-four hours. The facial expression was greatly altered, and assumed a hippocratic aspect. It was then that the note of alarm appeared in *L' Union*.

The treatment prescribed by MM. Drasche and Mayr brought at least a little ease. The pains were less sharp, the vomiting less frequent, and the patient tolerated some cold or iced aliments, milk, creams, etc., but the state was not less grave.

The persons who surrounded the Prince thought that it would be useful to have the opinion of a French physician. They demanded Prof. Potaire, who cared for the regretted Prof. Parrot, and would not abandon him for some days; but proposed M. Vulpian, who was accepted.

The 15th of July, M. Vulpian arrived at Frohs-

dorf, and saw the patient immediately. He confirmed with MM. Drasche and Mayr the existence of a tumor seated in the epigastric region, at the right of the median line, not well limited, and having at least the extent corresponding to the greater portion of the palm of the hand. There was a slight œdema, without pain, at the lower portion of the inferior part of the legs, and the tongue was the seat of a commencement of an epithelial proliferation (Muguet).

The 17th the physicians held a new consultation, and felt the tumor very distinctly in the epigastric region.

After this examination, M. Vulpian speaking first by invitation of his confréres, declared that the existence of a cancer of the stomach appeared to him extremely probable, and that if it was so the neoplastic tissue must be developed upon the mucous membrane of the convex part of the stomach, under the form of a plaque, at a certain distance from the pyloric orifice.

He was inclined to admit this diagnosis, upon the presence of a painful tumor in the epigastric region, upon the intolerance of the stomach, upon the nausea and vomiting during fasting, upon the loss of appetite and the special repugnance for food, upon the loss of weight that had preceded the symptoms for some weeks, upon a somewhat cachectic color of the face, and a slight œdema of the inferior members; furthermore, upon the fact that an uncle of the Prince had died of a cancer of the stomach.

M. Vulpian, charged to make known the result to the Count of Blacas, then confirmed the diagnosis of cancer carried by his two confréres, and also added that the cancer was probably seated, but not certainly, in the stomach; also, that the kidneys were somewhat altered, that there was fatty degeneration of the heart, atheromatous lesions of the arteries, and that these conditions rendered the condition more grave and menacing.

The following days the situation amended favorably. New courage was taken at Frohsdorf, although Dr. Mayr created no illusion. In effect, the symptoms returned in the night of the 8th to 9th of August; the feebleness augmented rapidly; the patient had lost sixty pounds since his return from Goritz. M. Vulpian was called again the 20th of August, but when he had arrived the morning of the 24th he learned that the Count had died at 7 o'clock and 20 minutes.

The Countess of Chambord having made known her opposition to an autopsy, it was only during the process of embalming, which was done fifteen hours after death, that the lesions could be seen.

M. Kundrat, professor of pathological anatomy at the University of Vienna, opened the abdominal cavity by a crucial incision that he prolonged to the superior part to retire the thoracic viscera. One could see by raising the epiploon; that the tumor was constituted by the mesentery, very wide, very much charged with fat in this region, and occupying an extent as large as the palm of the hand. The tumor was composed of a large number of hypertrophied ganglions without any cancerous or sarcomatous degeneration. The stomach offered nothing appreciable on the exterior. The lungs were sound. The heart had nothing more particular than a volume a little superior to the normal, and a great flacidity of the pericardium which presented a dead leaf color very pronounced. The aorta was strewn in its internal surface with little fatty spots, and small atheromatous plaques. The œsophagus and stomach were incised successively. The superior part of the œsophagus was entirely sound, but from the union of the superior four-fifths with the inferior fifth, to the cardia, there was seen many ulcerations of a grayish-black color, of a form generally round; near the cardia two large ulcerations occupied nearly all the circumference of the œsophagean conduit.

At the base of the ulcerations the mucous membrane was entirely destroyed; the muscular tunic appeared at these points. The borders of these ulcerations were not jutting, but rather as if they had been cut. The stomach presented the aspect of gastric catarrh. Here and there could be seen, by plaques, injection of small vessels. At the base there was a small tuberosity, some small ulcerations some centimeters from the phylorus, of which one presented the characters analogous to those at the inferior part of the œsophagus. The intestines and liver were normal. The state of the kidneys appeared to indicate a feeble degree of interstitial nephritis.

The viscera were to be replaced, and the physicians were not certain of having found all the lesions that might have existed, and those of which we speak could not be examined with the attention necessary. It was necessary to limit the examination to three or four minutes, for all the assistants. Therefore a histological examination was out of the question. It was upon these data that M. Vulpian wrote a remarkable chapter of diagnostic pathology. He passed in review the causes that would have produced these large and profound ulcerations. One cannot admit that these lesions were produced by a simple catarrhal inflammation, nor a sub-mucous inflammation of the œsophagus. One can invoke a possible atheroma of the arteries, but this supposition has no direct foundation, and like the others is open to objections.

M. Vulpian also rejects the hypothesis of poisoning. The toxic agents that can be invoked, are those which cause ulceration, as arsenic, phosphorus, the soluble salts of mercury, antimony and silver, the caustic acids and ammonia.

M. Vulpian does not admit that the lesions could be stationed exclusively in the inferior part of the œsophagus.

The Count of Chambord never ate alone, and his companions ate of the same dishes; none of them suffered either before or after the beginning of the malady.

M. Vulpian declares that it is incontestable that the disease has not had its departure from the ingestion of a poison. In spite of these denials, in the impossibility of finding a plausible explanation, the hypothesis of a poisoning will be held by many.

Whatever it may be, the history of the disease of the Count of Chambord is most curious, and we are under obligations to Prof. Vulpian, with his great experience and his great clinical sense, for having related it to us.

MEDICAL PROGRESS.

Poisoning by Nitro-benzole or Nitro-benzine. —The old oleum Amygdalæ Amaræ, or oil of bitter almonds, which was recognized as being as poisonous as prussic acid, has been replaced in commerce to a certain extent by a cheap and easy method for manufacturing essence of bitter almonds for flavoring purposes—and which is now called nitro-benzole or nitro-benzine, or by the French Essence de Mirbane. It still preserves its poisonous qualities, but its new name is calculated to remove suspicion on the part of the ignorant; consequently as its use increases in flavoring pastries, etc., cases of poisoning are becoming more common. Ziemmsens Handbook gives forty-two cases collected by Boehm, fourteen of which resulted in death. Drs. Van der Mursch and De Visscher report, in the *Annales de la Soc. de Gand* for August, the details of an autopsy made upon a child two years of age, which died in five hours after taking half of the contents of a bottle containing ten grammes of nitro-benzine, procured by its mother for making pommade. The symptoms were first, somnolence, followed by agitation, delirium and convulsions—no disturbance of the digestive organs. The autopsy showed marked rigor mortis three days after death, a decided hyperæmia of the lungs, no alteration of the alimentary canal, the contents of the stomach were of a milky whiteness with the odor of bitter almonds. The arachnoid membrane covering the brain was extremely congested, and the white substance of the cerebrum and cerebellum was markedly "sanded" (sable). There was a slight amount of serum in the lateral ventricles.

A coffee spoonful, according to Muller, nine grammes according to Schenk, of the essence of mirbane is sufficient to kill an adult. The absence of odor except from the contents of the stomach, would seem to favor the ideas of Letheby, who considers the nitro-benzine as reduced in the blood to aniline and picric acid, and that the symptoms of poisoning are those of aniline.

On the partial Regeneration and Reformation of the Liver. The *Archives Italiennes de Biologie* contains two articles by Prof. Tizzoni and Dr. Colucci respectively, which embody some interesting experiments on this subject. Prof. Tizzoni, in experimenting upon the spleen of a dog, accidentally wounded the inferior border of one of the lobes of the liver. Six months later he made an autopsy on the animal, and found the greater epiploon adherent to the liver at the seat of injury, which was repaired in greater part by a neoformation having all the macroscopic characters of the organ. The neoformation extended along the epiploon in the shape of a triangular tongue, 20 mm. long, 5 mm. broad and 2 mm. thick at its base, by which it was attached to the liver at a point corresponding to the lesion. This triangular neoformation had in its center a large blood vessel provided by the epiploon and with numerous collateral branches. About this vessel a tissue was found, giving all the characteristics of normal liver tissue. A careful histological study of the regenerated portion as well as of the neoformation, gave the following results:

1st. The hepatic cells respond to mechanical stimulus by a very active proliferation.

2nd. The reaction of these elements is not confined to the point of irritation, but extends to a certain distance beyond, diminishing in activity in proportion to the distance from the center of irritation.

3rd. This multiplication may produce, under certain circumstances, a regeneration of the liver, where the viscus has been wounded, as well as a neoformation of hepatic cells and biliary conduits beyond the normal limits of the liver.

4th. The experimental neoformation of the liver was accomplished in the same manner as in its embryonic development.

The further results of Prof. Tizzoni's researches are not given here, as they relate to histological details, the study of which in the article itself will best repay those working in the same field, except to say that, contrary to the condition which is found in partial regeneration of the spleen, the connective tissue of the epiploon closing the wound of the liver takes no part in the neoformation, other than in the formation of the blood vessels; it represents simply a stroma, in which the neoformation spreads itself.

Dr. Colucci gives the results of experiments performed on some nineteen subjects—white rats, including two guinea pigs, neither of the latter surviving the operations long enough to be properly utilized. The animals were killed at the end of eight, twenty-nine, thirty, thirty-four, and thirty-nine days, and the article is based on the examination of thirteen wounds made on different parts of the liver by the use of scissors and of the knife, by simple incisions and by excision of cuneiform pieces. These thirteen cases then were followed in two cases by fibrous cicatrices, in one of which a cyst filled with caseous material was found; in one case by incomplete regeneration, and in ten cases by total regeneration. His summary states:

When in white rats, one or more of the hepatic lobes are removed, the remaining portion hypertrophies to the extent of the volume of the liver itself.

This hypertrophy is due in the beginning to the enormous dilatation of the blood vessels.

This dilatation facilitates the emigration of the white corpuscles, which organize into vessel-forming cells, and, by direct adaptation, into hepatic cells.

After the lapse of about a month these hepatic cells have reached the ordinary size, the nucleus being nearly a third larger than in the normal liver tissue, the protoplasm remaining finely granular, and not containing much pigment, thus being readily distinguished from the pre-existing hepatic cells.

When cuneiform pieces were excised from the liver, union took place by means of a fibrous cicatrix, sometimes uniting the lips of the wound, but more frequently simply investing it, the lips remaining separated.

When simple cuts were made with a sharp knife, regeneration of the hepatic tissue followed, earlier and more constant on the convex surface, and later on the concave surface.

The best conditions for complete regeneration are: (1) contact of the lips of the wound; (2) a moderate inflammatory process; and (3) the non-inclusion of the epiploon in the wound.

THE ACTION OF IODOFORM IN DIABETES MELLITUS.—Prof. Bozzolo (*Archives Italiennes de Biologie*), after satisfying himself of the beneficial effects of iodoform in several cases of diabetes mellitus, caused a series of laboratory investigations to be conducted by his laboratory student, M. Balp, to determine the influence of iodoform upon the number of red globules, the quantity of hemoglobine, and the arterial tension. These observations were conducted with great care, and by the use of the most approved physiological apparatus. In two cases of diabetes he found that iodoform in large doses—that is, one to two grammes—diminished the elimination of sugar and the quantity of urine; that it diminished the number of red globules and of hemoglobine, and that it diminished the arterial tension. To explain the diminution of red globules, he cites the theory of Binz, that the iodoform, through the iodine which disengages itself, as in iodate of sodium, destroys the red globules, and produces partial coagulations. If this be the fact, the diminution must be progressive, and patients using iodoform would become rapidly anæmic, which anæmia has not been observed so far in cases under this treatment. The diminution of arterial tension would explain the effect of the drug in reducing the quantity of urine, in eliminating glucose, and on the quantity of globules and of hemoglobine; and Prof. Bozzolo inclines to the view that the iodoform exerts its influence on the nerve centers, and especially upon the vaso-motor center.

A FŒTUS WHICH REMAINED FIFTY-FIVE YEARS IN THE BODY OF ITS MOTHER.—M. Suppez, in a communication to the Academy of Sciences (*La France Mèdical*, Sept. 4), made some interesting remarks relative to the prolonged retention of fœti. He referred to such remarkable instances as that of Toulouse, 26 years; that of Sens, 28 years; that of Pont-a-Mousson, 30 years; that of Joigny, 31 years; that of Seinzel, 47 years; and finally, that of Quimperlé, 55 years, the specimen of which he presented. He gave two theories to account for this remarkable preservation; the old one of petrifaction—the fœti so preserved resembling fossils. The immediate principles of their bodies being replaced molecule by molecule by a gypsum, a silicious or calcareous substance, in such a manner as to change their substance without affecting their form or volume, Billement affirmed that the fœtus of Pont-a-Mousson was petrified. Bartholin, who saw the fœtus of Sens in the cabinet of curiosities of Frederick III, King of Denmark, affirmed that it was as hard as a stone. The second theory was that of progressive dessiccation. Neither the fœtus of Seingel, of Joigny, or of Quimperlé, were petrified, and the petrifaction of those cited remains a contestable statement. The fœtus of Quimperlé was not dessiccated, and so a third theory must be broached to explain not only why a dessiccated fœtus should be preserved for so long a time, but also why it should be preserved when not dessiccated.

The case in question was that of a woman who became pregnant at 28 years of age, and who enjoyed good health up to the age of 84, when she was admitted to the hospital of Quimperlé, and died in three weeks' time. The autopsy showed a tumor independent of the uterus and along the course of the right ovarian tube, formed by a cyst whose walls were extremely hard, with an irregular mamillated surface. On opening the envelope which appeared to belong to the mineral world, a child was found which had not undergone any alteration; it presented the ordinary attitude of the limbs flexed upon the trunk, the head bent upon the chest. The two pupillary membranes were perfectly developed, testifying to an age of six to seven months. The cutaneous covering, the superficial organs, the viscera in the great cavities of the body, all the muscles and all the soft parts had preserved their consistency, their pliability and their normal color.

To account for this condition of things, M. Sappez, recalled the demonstration of Pasteur where he showed a balloon (toy) containing pure air and the blood of a healthy dog, and another containing fresh urine which had been preserved for forty-eight days in a stove at a constant temperature of 30° C. without undergoing any change. Here, nature had thrown an envelope around the fœtus which contained neither air nor germs and the putrescible material was thus enabled to resist putrefaction.

EFFUSION OF BLOOD INTO THE CAVITY OF RETZIUS CONSEQUENT UPON A MUSCULO-ARTERIAL RUPTURE OF THE ABDOMINAL WALLS.—Prof. Heron Gripet through M. Polaillon has presented the report of an interesting case of this rare accident to the Société de Chirurgie de Paris (*Bulletin et Memoires*, Sept. 5). The patient while riding on horseback, threw his body back forcibly to protect himself from injury consequent upon the stumbling of his horse which fell upon his fore-knees, recovering himself quickly. A sharp pain in the abdomen and back caused him to dismount, and he had to be carried in a litter to his residence. Medical aid being summoned, he was found to be suffering from an enormous soft tumefaction of the scrotum, black and as large as the head of a child, abdomen enlarged, tympanitic above, dark below, sharp pain above Poupart's ligament corresponding to the left epigrastic artery. The bladder was evacuated by the catheter of normal urine; no blood. An enormous discharge of blood had taken place under the skin of the scrotum, in the perinæum, in and beneath the walls of the abdomen. Dullness was limited below by the ligaments of Fallopius, above by a horizontal line a little oblique from left to right, nearer the umbilicus than the pubis. The bladder was completely surrounded by the discharge, compressed and displaced so as to be prevented from performing its functions. The general condition presented no fever, no vomiting, no peritonitis, but syncope on the slightest movement. Under proper treatment of support and pressure, the results of the discharge of blood into the scrotum were relieved

rapidly, but for a long time there remained a resisting surface on the abdomen, most marked on the left side (the flanks were at no time affected). The only accident which occurred during the progress towards recovery was a cystitis resulting from a small prostatic abscess, caused by difficulty in using the catheter from the first; on the fifteenth day the urine passed spontaneously. Obstinate constipation was a marked symptom. In four months' time the patient was enabled to go to the country, walking with a cane, and in a markedly bent position. A year after the accident no trace remained.

One of the interesting appearances which developed as the patient improved was the intense and extensive ecchymotic discoloration; it resembled a pair of bathing drawers, covering the abdomen, the upper part of the thighs, following on the left side the sheath of the femoral vessels to the knee, and was very black about the scrotum and perinæum. It surrounded the anus laterally but not posteriorly.

That this discharge was due to a rupture of one or more arterial branches is argued from the fact of its rapid formation; the acute pain seated along the course of the left epigastric artery; and the descent of the ecchymosis along the sheath of the left femoral vessels, while on the right side the ecchymosis was limited by Scarpa's triangle. The arterial rupture was accompanied by a laceration deeply situated, of muscle fibers on the right side. The discharge extended from the sheath of the muscles posteriorly into the cellular tissue surrounding the bladder, distended the cavity of Retzius, compressed the bladder, spread into the penis, scrotum, perinæum, and surrounded the rectum. That it was under the peritonæum and not in its cavity is shown by its immediate spread to the perinæum, its limitation to the sides and anterior portion of the anus, and the absence of vomiting, fever, etc.

In presenting Prof. Gripat's case, M. Polaillon remarked that the question might arise, was not the perinæum injured by striking against the pummel of the saddle, and thus account at least for some of the symptoms present; but one could not readily imagine an injury of that extent which would leave the urethra intact. One point was obscure in the paper—the legs were completely motionless for several weeks, which could not be accounted for simply from the symptoms given of the discharge of blood. The patient at the time of the accident felt a sharp pain, not only in the abdomen but also in the back, which M. Polaillon considered as due to a laceration of the psoas muscle. When the patient was quiet his back was comfortable, but when his thighs were moved he suffered the same sharp pain as at the time of the accident, which indicated lesions involving the nerves of the lumbar plexus.

Absence of the Spleen.—Dr. Isidor Mehrer, in a communication to the *Wiener Medicinische Presse*, Sept. 2, reports that in a judicial post mortem made upon a woman 45 years of age, who had committed suicide by hanging, he was unable after a most careful examination of the abdomen and thorax, to find the slightest trace of a spleen, its accustomed place being occupied by the small intestine. The other organs were normal and properly developed, the liver alone being a little enlarged. The woman was healthy during her lifetime.

A Case of Atropine Poisoning.—Dr. Sink (Memorabilien Zeitschrift für and p. Aerzte) records a case in a sixty-seven year old woman, who was very decrepit, and suffered from iritis in the left eye. She was treated at the eye clinic by using 5 drops of a 1 per cent solution of atropine upon the conjunctiva every 4 days. The second application produced dizziness, unsteadiness of gait and dryness of the throat. The third application had the same effect, but the symptoms passed off in a few hours. After the fourth application, however, she fell senseless in the street on her way home from the clinic, was picked up by a policeman and taken to the hospital; where the register gave the following record: Patient small, scoliokyphotic, very decrepit, weight 35kg., constant delirium—makes movement with the hands as if to bring a glass of water to the mouth, or handles her clothes as if sewing, Pulse beat 180–190 to the minute, respiration somewhat accelerated, skin perfectly dry, tongue dry and cracked, voice harsh and unintelligible. The iris of both eyes dilated to the maximum.

There soon followed constant and powerful jactation. She was admitted 11 A. M.; it was 4 P. M. before she became quiet enough to allow of the use of the thermometer, which registered 38.4° C, at which time she was constantly calling for water, and complaining of the hoarseness and dryness of the throat. Towards evening she came to herself and discovered where she was. She refused all nourishment, but drank water eagerly. Pulse, 150 to 160. Pupils still fully dilated. The next day, after sleeping restlessly, the pulse had fallen to 130; the temperature was 38.2° C; jactation entirely gone. She complained of great weakness; on the 3rd day she left her bed; temperature normal; pulse 110; skin moist; pupils moderately dilated, but still very sluggish; the voice had recovered its tone. In the course of the day the appetite returned, and she was discharged. She has since fully recovered.

Among the points of interest in this case, is the elevation of temperature, which is so rarely observed in cases of atropine poisoning, that a lowering of temperature is by most authors considered as a constant symptom. The choreic movements are also peculiar. The reporter is careful to state that there were no anæmic symptoms noticed.

Wounds of the Thoracic Duct. — The attention of Dr. E. Boegehold (Archiv für Klinische Chirurgie) was called to this subject in assisting at the removal of a large carcinoma from the neck of a man, where during the operation the throacic duct was wounded at its entrance into the left jugular vein. The rarity of this accident led him to look up the literature on the subject to obtain answers to certain questionable points, viz: 1st. Is it possible to wound the thoracic duct alone, or is it necessarily wounded with other organs through the lesion of which death might follow? 2nd. What are the con-

sequences of a wound of the thoracic duct; and, 3rd. Are wounds of the thoracic duct curable? It is easy to see that to find these answers he was obliged to reach through a wide range of literature, and accordingly he has brought together in his paper a large number of observations in greater or less detail as suited his purpose, which become very valuable for future reference.

The first question, that wounds of the thoracic duct alone can occur without wounds of other parts that are dangerous to life, is answered in the affirmative. It is possible under favorable conditions to wound the duct from behind or from the side. Punctures or short wounds that pass by the side of the vertebræ, can produce this lesion, but he found no other cases cited, except his own, where wounds occurred in the operation of extirpating large tumors. In answering the second question, what are the consequences of wounds of the thoracic duct, he found a number of cases where complete obliteration or compression of the duct were without symptoms. It would seem that collateral branches were very quickly established to lead the passage of the chyle into the blood current. There were two dangers that followed the wounding of the duct where the flow of chyle was not checked, viz: compression of the lungs and heart. This leads to the answer of the third question, are wounds of the thoracic duct curable, which he answers by advising an opening into the pleural cavity for the relief of its viscera from compression, and the use of well selected diet to compensate for the loss of the chyle. The closure of the wound itself occurs by compression and retraction of the walls of the vessels during respiration, by the compression which the surrounding tissues exert, or by the outpouring of fibrin. A number of experiments go to prove that the walls of the duct are capable of strong contractions, as has been shown by stimulation through the electric aparatus two hours after death. The lymph or chyle pressure in the duct is not high, being put as equivalent to 9–15 millimeters of mercury (Weiss), or 8–10 millimeters (Luwig and Noll.)

NEW INSTRUMENTS.

A NEW DECAPITATING INSTRUMENT.

The *Boston Medical and Surgical Journal*, September 27, gives a wood cut with description of a blunt hook, similar in form to the blunt hook used in obstetrical operations for breaking the neck of the child in difficult labor, and by repeated twistings for severing the head from the body. This blunt hook, however, has been modified by Dr. Robert B. Dixon by the addition of a concealed knife, the blade of which is exposed to the extent of one-fourth of an inch on the inner side of the hook, by simply turning a thumb-screw in the handle. By this means, after breaking the neck of the child by the blunt hook as ordinarily used, the point of the instrument, being protected by the forefinger, the blade is made to complete the operation by severing the head from the body.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, OCTOBER 20, 1883.

EXPLANATION.—During the many years of our connection with the editing and publishing of medical periodicals, we have neither found it necessary to make frequent apologies to our readers, or to indulge the habit of attributing every blunder to the "Printer's Devil." But in the management of our present enterprise we have encountered two annoying difficulties. The contract with the printer includes the furnishing of paper, composition, presswork, folding, wrapping, and mailing of the JOURNAL, and he has faithfully endeavored to fulfill his contract. But his first arrangements for wrapping and mailing proved so defective, that it was the principal cause of making each number reach its readers a week after the date of its issue. This evil had been gradually overcome, and we were anticipating the pleasure of commencing the second quarter of the JOURNAL on time, and in reasonably good order, when to our astonishment we found, soon after the issue of the thirteenth number, that it had been actually printed and mailed with many of the errors marked in the second reading of proof uncorrected, and the first column on page 400 just as it was originally set up by the compositor, without so much as having had an inverted letter turned right end up. Yet every line of it had been read by the proof-readers, and the errors marked for correction. A new foreman had been placed in charge of the printing department only a few days previous, and doubtless allowed this particular column to go into his form uncorrected, by mistake. But measures have been taken which, it is thought, will render another such blunder impossible, and also secure a more faithful correction of all errors marked in the several proof-readings.

DEATHS. — Professional circles throughout the whole country have been startled by the unexpected death of Surgeon General Crane, of the United States Army. A brief but interesting obituary notice of him will be found in another column, under the head of *Necrology*.

The political press have already named several prominent members of the medical corps of the army as probable successors to the high office so suddenly vacated. Among the most prominent of those named are J. S. Billings and Surgeon Murray.

ON the 4th inst. Dr. Wm. H. Byford, Jr., died in Minneapolis, Minn., in the 33d year of his age. He was the son of Prof. W. H. Byford, of this city, so well and favorably known as an author and teacher in the department of gynæcology. The deceased was a young man of good natural endowments, and an apt scholar. His brief professional career was much interferred with by ill health, and he finally succumbed to that fell destroyer, pulmonary phthisis.

ON the 14th inst. Dr. Brockholst McVickar, one of the oldest physicians of this city, died in Buffalo, N. Y., where he had been spending some time in feeble health. Dr. McVickar had been an active and highly respected practitioner in this city about forty years, and held several public positions of honor and responsibility. He died at the age of 73 years.

THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF VERMONT.—It is expected that Mr. John P. Howard will make another liberal bequest to the University, part of which will be devoted to the construction of a new building for the Medical Department.

MEDICAL HONORS.—Drs. F. S. C. Grayston and R. F. Blount, two prominent medical practitioners in Indiana, have recently been complimented with the honorary degree of Master of Arts, by the Butler University, at Indianapolis.

M. THUILLIER, a scientist, and member of the French Cholera Commission, sent to Egypt under the direction of M. Pasteur, to investigate the cause or causes of the cholera prevailing there, has died from the disease contracted in the cholera hospital of Ghedid, in Alexandria.

EDITORIAL CHANGE. — Dr. Frank Woodbury has become the editor of the *Philadelphia Medical Times*, in place of Dr. H. C. Wood, retired. Dr. Woodbury is well qualified for the position to which he has been promoted.

YELLOW FEVER. — This fever is reported to be still prevailing severely in many of the cities of Mexico, particularly at Mazatlan, Manzille, San Jose, Costa Rica, Nicaragua, Acapulco, Zucatula, Manzanillo, Corrientes, and San Blas. Its tendency to extend northwest is such that precautionary measures have been taken by the Surgeon General of the Marine Hospital Service, to prevent its being carried into Arizona.

A few cases continue to occur in the Navy Yard at Pensacola, and at the Quarantine Station on Ship Island.

AMERICAN CLIMATOLOGICAL ASSOCIATION. — A society organization with this name was organized in New York, September 25th, with the following officers: President, A. L. Loomis, of New York; Vice-Presidents, F. H. Knight, of Boston, and W. H. Geddings, of Arkansas; Secretary and Treasurer, J. B. Walker, of Philadelphia. The next annual meeting is to be held in Washington the first week in May.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting October 4th, 1883. The President, R. A. Cleemann, M.D., in the chair.

Dr. W. H. Parrish reported a

PORRO-MULLER OPERATION,

and exhibited the uterus, the abdominal incision (which had united) and surrounding wall, the stump of the cervix in position at the lower angle of the wound, the entire external genitals and mons, including the vagina and bladder. The ureters were found entirely free.

Dr. R. P. Harris remarked that this was the only Porro operation that had been complicated by diseased kidneys. The case was an unfavorable one, in consequence of this complication. The albuminous character of the urine was supposed to be due to mechanical interference by the enlarged womb, but, unfortunately, this was not so. The bad habits of the patient had led to a general disease of the arteries, as well as of the kidneys. The former were atheromatous. The Porro-Muller operation has been performed thirty-four times; the unmodified Porro, eighty-two times; total, one hundred and sixteen cases, of which forty-eight per cent. have been successful in saving the lives of the mothers. When the pedicle or stump is dropped, it ceases to be a Porro operation. Of thirteen cases in which the stump has been dropped, eleven have been fatal. Dr. Godson is writing a full history of this operation including the many experiments which have been made on animals, to determine the best method for each step of the operation and the causes of death. Dr. Porro

has saved four out of five cases in his own hospitals. In the Milan Hospital nine were saved out of twelve. In Germany the success has been poor, but in Austria better.

Dr. O'Hara asked why the Porro operation should be modified, when it had been so successful in the hands of the originator.

Dr. Harris: Dr. Muller was called upon to operate in a case in which the fœtus had been dead for some time and was putrid, the uterus being distended with gas. To prevent any septic matter finding its way into the abdominal cavity, he enlarged the abdominal incision, lifted the uterus out of the abdomen, and used cloths around it and over the wound before incising the uterus. This patient recovered. The mortality this year has been very slight.

Dr. E. E. Montgomery had been associated with Dr. Parrish in this case as one of the hospital staff, and at first thought the case should be allowed to go on to full term before operating, and that Cæsarian section or laparo-elytrotomy, as practiced by Dr. T. G. Thomas, should be the selected form of operation; but Cæsarean section has been very fatal in large hospitals, doubtless because it is generally a last resort after the patient has been long hours in labor, and for that reason is dangerous. But if a large drainage tube was passed through, entering at the abdominal incision and out of the vagina, and a constant flow of antiseptics kept up, a good condition might be secured.

During the operation a few modifications suggested themselves. One of these was to divide the cervix uteri by a V shaped incision, the peritoneal surfaces being united over the wound, a flat Peaslee drainage tube being introduced and the stump dropped.

Dr. Harris tells me that Schrœder has tried this, and that it has been done twice by ———, once successfully.

He thought the wire of the ecraseur passed around the cervix before removing the child, a source of danger to the latter, as well as being likely to embrace a loop of intestine.

Dr. Harris, in criticising the plan of dropping the stump, called attention to the fact that the portion of uterus embraced in the ligature is not a pedicle; it is a stump, and will continue to contract, and oozing of blood, or even profuse hæmorrhage is liable to occur. It has been found impossible to prevent this by any form of ligature that has been tried. If the stump is dropped this hæmorrhage or oozing will take place into the abdomen, and will be a certain cause of death. Dr. Isaac E. Taylor came near success, but his patient died from thrombosis on the twenty-sixth day, during an attack of phlegmasia alba dolens. It would be very desirable to avoid the dragging on the abdominal wound.

Dr. Montgomery gave a short resumé of the cases treated by dropped stump, and the causes of death in them.

Dr. Parrish remarked that the disease of the kidneys was undoubtedly the cause of death, the implanting of the acute condition caused by pregnancy upon the previous chronic disease. He also spoke of the possible deleterious effect of the ether upon the system laboring under such a condition of the kidneys. It made the administration of ether in such cases a very serious matter.

Dr. Parrish also exhibited specimens from a case of

EXTRA-UTERINE PREGNANCY

and made some remarks upon the history of the case. He had attended the patient in her first labor seven years ago. She was a brunette of very restless and active habits and disposition and was quite uncontrollable. She was up and about her house a few days after her labor, and the result was sub-involution which persisted until her death; during the interval she had passed out of his care, and had been subjected to local treatment, including the use of sponge tents. There had developed pelvic inflammation, and later she was troubled with frequent micturition and dysmenorrhœa. She afterwards came under his care again for the treatment of these troubles, and on one occasion he had applied leeches to the cervix and gave her positive orders not to leave her bed, but festivities were going on, and she went down and assisted in making ice cream and cake, and later in eating them; this indiscretion was followed by a second metritis. He afterwaid treated for the dysmenorrhœa by numerous minute punctures of the cervix and the application of tincture of iodine, and the introduction of a sponge tent. The next period was not so painful and the second was missed. He told her she was probably pregnant, but two weeks afterward a slight flow occurred, and fearing an abortion he advised rest in bed. She refused an examination and would not be quiet; the flow continued but did not increase, but there was pain in the pelvis in addition. Eleven days after the flow commenced a sudden attack of intense pain occurred, the patient was completely prostrated, and was carried up stairs. As he was not at home, Dr. O'Hara was called in and used morphia hypodermatically. He found on examination a mass in the posterioi part of the pelvis; the uterus was pushed forward against the pubes. He diagnosticated rupture of a fallopian pregnancy cyst and internal hæmorrhage, and gave opiates to relieve the intense pain. The pallor and exhaustion became more pronounced, and death occurred thirty hours after the first symptoms. Other physicians who saw the patient did not agree with Dr. Parrish in his diagnosis. The autopsy revealed no recent peritonitis; there was blood in the pelvic and abdominal cavities. This had escaped from a ruptured cyst of the fallopian tube. The fœtus exhibited was found in the pelvic cavity. The position of the cyst was such that it would have been an easy operation to open the abdomen and ligate and remove the cyst and ovary and cleanse the pelvic cavity. The fallopian tube involved is dilated except at the uterine extremity. The other tube is occluded at the fimbriated extremity; inflammatory bands derange the relations of the different pelvic organs. We have here the history of inflammatory processes changing the epithelial linings and relations of the fallopian tubes to the uterus and ovaries as predisposing causes of extra-uterine pregnancy.

Dr. Harris remarked that the hæmorrhage after conception, the peculiar location of the pain, and the pallor make the diagnosis an easy one. He had one patient that recovered spontaneously. The operation suggested by Dr. Parrish has been performed once successfully. Dr. T. G. Thomas made the diagnosis and wished to operate, but the husband, a physician, differed in opinion and would not consent; that patient lived sixty hours after the accident. Dr. Playfair in his book advises the operation.

Dr. O'Hara saw the case early and could not make such a diagnosis. He saw no sign of internal hæmorrhage then. He thought of peritonitis or cellulitis. There had been no history of a cyst of the uterus. He did not see how a positive diagnosis of extra-uterine pregnancy could have been made at that time. The patient was certainly going to die, and he would approve of an exploratory operation.

Dr. Parrish remarked that Dr. O'Hara was perhaps right. He, (Dr. P.) was the only physician present who looked at the case in that light. All the others disagreed and had their reasons. If this diagnosis of a probable extra-uterine fœtation had been made early, before the accident, then when the acute symptoms supervened a quick diagnosis could have been made as to the cause of the pain. He described a fold of peritonæum found behind the uterus, and as the clot had the appearance of different ages, portions being yellow, he suggested that an extra-peritoneal hœmorrhage had first occurred under this fold, perhaps ten days before the intra-peritoneal hæmorrhage which was the cause of death.

Dr. Beates exhibited for Dr. Boardman Reed, of Atlantic City, N. J., a tumor of the uterus which the latter supposed to be an early stage of carcinoma, but no microscopic examination of the specimen had been made.

Dr. Beates reported the case of an infant which appeared well and hearty at birth but died in collapse on the third day. An autopsy revealed acute gangrene of the mucous surface of eight feet of the ileum; hæmorrhage had occurred into the intestine and was the immediate cause of death.

W. H. H. Githens, Secretary.

CHICAGO MEDICAL SOCIETY.

The Chicago Medical Society resumed its regular meetings on the evening of the 15th inst., after a vacation of two months, and it is hoped the lively interest manifested will be continued. There was a large attendance of members, and the unusual spirit manifested will be productive of many valuable and interesting papers and essays before the close of the current year. The President, Dr. D. W. Graham, gave a short address of welcome in the most appropriate manner, and Dr. L. H. Montgomery recorded the minutes.

The first paper was an extensive one, being "*The History of Insanity in Chicago*," compiled from an analysis of 3,000 cases treated at the County Insane Asylum during the past twenty years, by Dr. S. V. Clevenger, special pathologist of the Cook County Asylum. The following is a brief synopsis of the paper:

Many things have interposed to baffle his endeavors to present an exact history of the medical progress of this asylum, giving statistical information, etc. For during the time prior to the great Chicago fire, which destroyed all the county records—and the paucity of asylum papers dating earlier than 1871, and also the seven years anterior to 1878—the asylum books were kept in a very careless manner, blotted, smeared, and full of errors. At this time the superintendent assuming charge had transferred to new pages all the case histories obtainable from previous records, and the fuller details obtained from friends of patients. This mass of information has afforded the material for this article, but in analyzing cases earlier than 1878 many sources of error must be eliminated before they can be made available statistically. In *ante bellum* days there was no county asylum. At that time and during the year 1866 insane persons were treated in the wards of the poor-house, also subsequently and during the period from October 1, 1867, to January 10, 1871. Some very comical stories are told of this *regime*, from which the writer deduced that the welfare of a patient was insignificant alongside the chances of stealing a dollar or so, in those times. January 1, 1871, the poor-house had outgrown itself, and the necessity for differentiating insanity from pauperism had become apparent enough to justify the erection of a large brick building, capable of accommodating 300 patients.

A new superintendent was appointed who started out with true medical animus to better the condition of the insane, but the book keeping and records were not satisfactorily kept. January 1, 1875, a change was made in the appointment of superintendent who served until January 1, 1878, at which time the present incumbent's term began, and who has served uninterruptedly to this date.

The writer had incorporated some sixteen different tables in the paper, showing the number of admissions each year (male and female), recoveries, improved, unimproved, sent to the State Hospital, died, unknown, also the duration of residence in asylum of male and female patients, occupations, maximum per cent., minimum per cent. and mean per cent. of those who recovered, improved, died, etc., being very comprehensive and complete in these details, besides a table showing the psychosis of patients admitted during the fiscal year ending August 31, 1883 (re-admissions included), which to elaborate upon without giving the figures complete or in full, might do the author an injustice. Suffice to say that in comparing the figures with some writers in medical journals there is much unnecessary cavil at the term "recovered" as used by asylum statisticians. One reason for this probably is that where 100 can not be obtained in footing up any table requiring it, differently based calculations without all the factors will require additional study and greater chance of error.

The author quoted figures of the Californian asylum at Napa, showing the increase of insanity in that State from 1 to 833 persons in 1860, to 1 to 388 in 1880, and that in this proportion there will be one

insane person to two sane in the year 2000 in that State. However this apparent result occurs in all new countries. Just so it is with the Chicago insane, the proportion of whom to the population is somewhere in the neighborhood of the California figures of 1880 (1 to 383), as there is a great influx of paupers from Europe into Chicago each year. The statistics of the Kankakee and Elgin asylums so far as they relate to Chicago insane, should form an integral part of future estimates in connection with our county asylum in arriving at an idea of the proportion of insane in our city population, with their death and recovery rates. The paper concluded with the exhibition of a number of hypertrophied brains and hearts; one specimen, the heart of a woman weighing 24 ounces and correspondingly much larger, also a brain weighing 57 ounces, the "pons" of which weighed 4 ounces and unusually developed, was that of a Swedish physician, who, when alive, was unusually intelligent.

Dr. J. G. Kiernan reported another case of "Insanity from quinine," in addition to his published cases of two years ago, viz.: R. B., aged thirty-eight, has a sister epileptic; a maternal grandmother and a maternal aunt died from "rush of blood to the head." The patient resembles the maternal side of the house in appearance and disposition. He has never been able to take even a small quantity of beer for fear of affecting his head.

He was recently attacked by fever of a quotidian type, having come from a malarious district. Upon the advice of a fellow workman, he purchased and took ℈i of quinine sulphate at a dose. In an hour thereafter he was violent and destructive, smashing furniture purposely. At this stage his friends called Dr. K———. There was a wild purposeless violence, but no delusion or hallucination present. He was very incoherent and hilarious. This condition disappeared in two hours, he having meanwhile been given a hypodermic of conine, which controlled his movements. A second dose of the quinine led to exactly the same results, and its ætological influence was therefore clear. Since disuse of the quinine there has been no further psychical phenomena. A case of transitory fury due to quinine, was reported in the *New York Medical Journal* October, 1882, page 406, which is the only case in literature that we remember that tallies with this case reported to-night. Such cases as these are likely to become of medico-legal importance.

I have heard of three instances in which the use of quinine has been alleged as an excuse for certain escapades, *seemingly the result of intoxication.*

Dr. Clevenger asked if there was not some predisposing or exciting cause in the case? Answered, that all the cases had a hereditary or neurotic taint.

Dr. R. H. Engert knew a man in Mississippi to die from the effects of a single (large) dose of quinine, but did not know the quantity taken. The patient became violently delirious and succumbed.

Dr. E. Andrews offered a resolution which was adopted, directing the chairman to appoint a committee to confer with the Directors or the Public Library on the subject of increasing the medical department of the library.

Adjourned to the first Monday in November.

AMERICAN ACADEMY OF MEDICINE.

The Eighth Annual session convened in the building of the New York Academy of Medicine, New York, on Tuesday afternoon, October 9th, at three o'clock, the President, Dr. H. O. Marcy of Boston in the chair. After the transaction of routine business, the applications for fellowship approved by the council were read by the Secretary and balloted for by the Academy. The following gentlemen were admitted into fellowship during the entire session: Drs. A. C. Kemper, Cincinnati, O.; John Green, St. Louis, Mo.; Surgeon-General C. H. Crane, U. S. A., Medical Director A. L. Gihon, U. S. N., Washington, D. C.; J. Corbin, E. F. Mordough, Brooklyn, N. Y.; E. B. Bronson, L. P. Walton, R. P. Lincoln, P. A. Morrow, Herman Knapp, New York; P. J. Farnsworth, Clinton, Ia.; E. V. Stoddard, Rochester, N. Y.; Z. B. Adams, Farmingham, Mass.; F. L. Dubois, Tromar J. Smith, Bridgeton, N. J.; E. L. Dunster, Ann Arbor, Mich.; J. K. Weaver, Morristown, Pa.; W. T. Clute, Schenectady, N. Y.; J. A. Stewart, Baltimore, Md.; A. Brown, Hellertown, Pa.; F. H. Gerrish, Portland, Me.; J. E. Emerson, Detroit, Mich.; E. Hartshorne, Philadelphia; J. H. Patzski, St. Augustine, Fla.; and W. S. Todd, Ridgefield, Ct.

The first paper of the afternoon was that of A. D. Rockwell, of New York, entitled "The Late Dr. Geo. M. Beard—a Sketch," in which he endeavors to show rather what Dr. Beard *was*, than what he did. He showed him as a man of zeal and industry, yet ready at any moment to lay aside his work and listen with untiring patience to the conversation of anyone. One of his most striking characteristics was his humor, and to this was largely due his reputation for eccentricity. Many instances in his life were cited to prove the author's statements.

The next paper was by Dr. Benjamin Lee, of Philadelphia, on "The Value of an Acquaintance with Botany as a Preliminary to the Study of Medicine." He deplores the present low grade of requirement for medical students, and the dropping of every topic but the actually medical, and especially the study of botany. He then entered into a historical study of the labors of the early botanists in America, more especially of those connected with the University of Pennsylvania. The earliest work on our American plants was published at the Green Dragon, outside Temple Bar, London, about two centuries ago, which was chiefly valuable in describing a combination of lime juice with the spirit of sugar, and which they call "punch." The value of our native materia medica was pointed out and the deplorable ignorance everywhere existing with regard to it. He urges the return of the study of botany to our medical schools, since were the study not begun by this time it probably would not be entered upon at all.

Dr. Traill Green, of Easton, read the next paper, entitled "The Imperfection of Technical Studies as a Means of Mental Culture." The author proved by citation of examples that the sciences are subjects with which physicians have been familiar for a long time, indeed they were among the men who made

them sciences, and hence they are able to speak with authority upon the subject. If the so-called scientific training embraces the only studies by which men could be educated there could have been no truly educated men before the birth of modern science. Sir Isaac Newton's learning was nothing until he discovered the law of gravitation, nor was Harvey a learned man until he discovered the circulation of the blood. Among lawyers, Coke and Sir Matthew Hale; among theologians, Philip Dodridge and Jeremy Taylor; among physicians, Boerhave, Sir Astley Cooper, Sir Henry Holland and Dr. Watson, among others, were uneducated. Even in technical schools the teachers are recognizing the need of general training, and they are now asserting that such schools are post-graduate schools, and that those entering should have a preparatory training. The advocates of the assumed modern method of mental development are apt to jump at any little statement which they think is an admission upon their side, on the part of education, as witness the case of President Eliot and more recently that of Charles Francis Adams, Jr., each of whom afterwards denied the interpretation placed upon their remarks, which is confirmed by the reading of their address in its entirety. The old curriculum is adapted to the cultivating of the mental faculties, the *educating* of man, while the cultivation of single capabilities do not make a well rounded man. It has been stated that college professors in time become one-sided, and if that is the case among men who in ithe start receive a general training how much the more would it be apt to be so in the specifically trained.

Dr. Charles McIntire, Jr., of Easton, follows with a paper entitled, "Is it Fair? A study of the Comparative Political Position of the Medical Profession of the United States." This paper assumes that law, theology and medicine were alike learned professions and consequently should be considered as worthy of dignity. But while in theology and in law, the members of each profession were guardians of their own ranks, the privilege was denied to medicine, a condition of things thought not to be fair. Among the reasons adduced for this condition, the author places the nature of our calling and the indifference of the profession as the chief ones.

The last paper of the afternoon was by Medical Director A. L. Gihon, U. S. N., on "The Higher Plane in Medicine."

He called attention to the fact that the regularly graduated M. D. was not necessarily a physician in its true sense. A "doctor" in the people's phraseology includes extremes of possessions and pretentions, and the profession themselves are largely to blame for the elasticity of the classification. To the many a good fee is of more importance than a valuable increment to our knowledge. The taking of students in offices to enter upon the study of medicine before even there is a knowledge of knowing how to study; the mingling of the elementaries and the applied in our medical schools by which a man soon learns to remember recipes and disregard the basement facts of chemistry and materia medica of the ingredients of the prescription, produce men for whom the profession and the profession only are to blame. Many instances were given, taken from the examination papers of physicians applying for entrance into the Naval Medical Service to show the utter unfitness of the examinee to understand the meaning of the words much less to comprehend their proper use. It is not only desirable that there should be a preparatory training but essential. The very language of anatomy, even as now taught, is incomprehensible without such training, and the lack of such preliminary knowledge is an inpenetrable barrier, as long as the ignorance remains, to his advancing to the higher plane of professional life. But all thorough preparatory training grades and éxtended medical courses, severe examinations by disinterested boards are not enough unless the very atmosphere breathed by the student is saturated by preceptor, professor and practitioner with the thought that the service of the medicine is more than a fee-taking prescription-giving routine. If it is impossible ever to arrange that all shall enter upon this higher plane, there should speedily be arranged a means of distinction between the two classes.

The afternoon being far spent, the discussion of these papers was deferred until the morning session.

The evening session was devoted to listening to the President's address, having for its theme "The Recent Advances of Sanitary Science the Relations of Micro-Organism to Disease."

He began by referring to the "unexpected honor which one year ago your suffrages conferred upon me in electing me to preside over your counsels.

The academy owes its existence to a wide spread spontaniety of feeling, that an organized effort should be had to elevate the standard of medicine. The success of our efforts should not be judged by our own feelings, but must be left to the criticism of those outside our number. The history of medicine, studied in a broad, philosophic spirit, is of interest and profit, and its evolution with the other sciences marks an era in civilization. Differences of opinion have and will continue to exist, but other things being equal, the better trained and armed soldiery wins. *Rationalis ne medicini* exists alone without rivals, while *isms* and *pathies* will cease to be. The duty of the physician is two-fold; first the prevention; the cure occupies the second place. Sanitation can hardly be called a science as yet; many of our modern appliances were known and used by those of ancient times. Hippocrates saw light in the same age in the history of Greece that gave birth to her famed poets and philosophers, yet he formulated the fundamental principles of "pure air, pure water, and a pure soil."

The discussion of the problems of life are not only instructive but fascinating. Mohammedism at least has the virtue of instilling principles of cleanliness and careful living. The plagues of the middle ages and the devastations following the crusades were but preventable filth diseases.

The vital processes in their sway over matter hold the balancing between waste and repair, and this hypothetical equilibrium is perhaps the best definition of health. The safe removal of waste, worn out

material is one of the chief factors of sanitary science, and its complexity varies directly with the number of individuals gathered together, such as is possible in the presént age of steam. As we cannot escape from our atmosphere, a consideration of its impurities naturally first claim our attention. The rates of oxygen and nitrogen is somewhat stable; the effect of carbonic acid has been greatly exaggerated, its ill effects being chiefly seen when oxygen is withdrawn from the air for its production as in combustion or respiration. The influence of oxygen must be carefully considered, since it is a great oxidizing agent for decomposing organic matter.

The foreign ingredients of the atmosphere are very various, and may be carried great distances by aerial currents. African organisms have been found in in the air of Berlin. Air, without the presence of motes and dust, will not reveal the passage of a beam of light, as shown first by Tyndal. Amid these motes are to be found many septic organisms, the knowledge of which and their exclusion from wounds has marked an era in surgery, and is helping in the more difficult problem of the germ theory of disease.

Impurities exist in water as well as in the air; mineral constituents not only but organic material which may or may not be harmful. As when treating of the air the ever present moisture was an important factor, so in water, soil pollution must ever be taken into consideration. The importance of the study of the sources of septic poisoning can be inferred from the fact that in the late war zymotic diseases killed more than bullet or bayonet. A blind man, no matter how well armed, is a dangerous ally. How can one who is blind to the condition direct as to the prevention of disease? There must be an atmosphere reasonably free from defilement of organic waste, a system of sewerage which shall continue in a steady flow from beginning to end, and a pure and ample water supply.

"Be it our bounden duty as physicians to disseminate to the masses proper instruction in the cardinal virtues of right living, and to demand from our government wise sanitary laws, both State and national, in the enforcement of which every house shall be builded and maintained as sanitarily safe as architecturally; rich and poor alike abundantly supplied with pure air and water, and have their habitation upon an uncontaminated soil."

At the conclusion of the address Dr. Marcy had projected on the screen a number of slides illustrating the character of dust as found in the air, the impurities of water, bacteria, etc.

After the address, which was listened to by quite a number of invited guests, the fellows held their first subscription collation under the rule adopted last year, and had a very pleasant social time.

Session of Wednesday morning. Shortly after 10, the Academy was again called to order. The treasurer's report was read and referred to an auditing committee; the balance on hand amounting to $238.09. The secretary reported that the council had nominated Dr. J. Marion Sims, of New York to honory fellowship. The Academy accepted the nomination and elected Dr. Sims.

The Nomination Committe appointed yesterday suggested for officers for the ensuing year:

President—Dr. Benjamin Lee, Philadelphia.

Vice-Presidents—Drs. A. L. Gihon, U. S. N.; Nathan Allen, Massachusetts; G. F. Shrady, New York; E. J. Birmingham, New York.

Secretary and Treasurer—Dr. R. J. Dunglison, Pennsylvania.

Assistant Secretary—Dr. Charles McIntire, Jr., Pennsylvania.

Place of next meeting, Baltimore, Md.

The report was rceeived and the suggestions adopted.

The first paper of the morning was that or Dr. L. S. Pilcher, of Brooklyn, entitled, "The Relation of Medical Journalism to Higher Medical Education in America." Before reading the paper Dr. Pilcher reviewed some of the papers of yesterday, criticising adversely their conclusions, and gave a different value to the words "higher medical education" than the usually accepted one. His paper showed that during the past twenty-five years medicine had been in a state of fermentation. With modern facilities of travel and communication, provincialism is impossible. It has been a period of scientific research, in which medicine has kept pace, and to the medical journals has been given the duty of gathering, examining and starting this work. The qualification of a physician will be decided by two things, both from the people, first, legislative enactment, and secondly, (and the more powerful) public opinion. That system of education will prevail that will produce men who will be acceptable to the people. In this higher education medical journals aid.

Dr. Pilcher's paper was discussed by several of the fellows whose conclusions were different from those of the author of the paper upon several points.

The next paper was by Dr. J. Cheston Morris, of Philadelphia, on "The Milk Supply in Large Cities." The great essential of our Aryan civilization is milk; its importance has been shown from the Sanscrit mythological period until to-day. It is of use to the child, the invalid, and the person of health. Nothing can be done by art to improve it; its best condition is as it comes from the cow. And a great problem is, how can it be so supplied to large cities. The plan suggested was one that has to some extent been adopted in several of our cities. The cows are carefully kept and well fed, the milk is cooled and strained, shaken to thoroughly mingle cream and milk, put into bottles, corked, and sealed by a strip of paper giving the name of the farm and the date. These are put into boxes, shipped to the city and distributed to the consumer, the milkman gathering up the jars of the day before. The importance of the subject may be seen as at the present rate of supply, Philadelphia expends about $100,000 a day for milk.

The next paper, by Dr. A. D. Rockwell, of New York, was on "The Exact Value of the Electrolytic Method." The author in an inductive manner from a number of cases showed where we might be able to succeed, and in what we would be apt to fail in the use of electrolysis in surgery.

Dr. Dunglison, on behalf of the Committee on Laws of Medical Practice in the United States and Canada, read the annual report of the committee' showing, upon the whole, progress in the efficiency of such laws.

A paper on "The Importance of Cleanliness in Surgical Operations," was read, in the absence of the author, Dr. R. S. Sutton, of Pittsburg, by the Assistant Secretary, who states that while it had the same title as a paper submitted by Dr. Sutton before the American Gynæcological Society, it was an entirely new paper. While there are germs, bacteria, etc., infesting air and animal organism, they are not all noxious, but because some are, we must fight against all. That cleanliness in every detail would accomplish as much as the antiseptic methods, indeed the success of the antiseptic method was due greatly to the cleanliness.

Dr. P. D. Keyser read, in the absence of Dr. L. P. Bush, of Wilmington, Del., the last paper of the session, entitled "Some Thoughts on Vaccination." Vaccination is a great boon, yet there are many objectors, many of whom do not properly understand the facts of vaccination. For example, it was gravely asserted by a practitioner that vaccination, during an epidemic of small-pox, would increase the liability of the person vaccinated to be attacked by the disease. Then again, many who have the operation performed upon them have but spurious results, and relying upon this, are attacked and lose faith. The subject should be one of education among the people, and public vaccinators should be appointed, with salaries, to see that all are properly vaccinated.

At the conclusion of the paper, Dr. Marcy made a short but eloquent valedictory, and appointed Dr. Keyser a committee of one to induct the President elect.

Dr. Lee in a few fitting words took the chair, and appointed as additional members of council, Drs. C. C. Bombough, of Baltimore; Wm. Elmer, Jr., of Trenton; and J. Cheston Morris, of Philadelphia.

The Academy then adjourned. The meeting was the largest in its history, and of full and sustained interest from the start.

BOOK REVIEWS.

A Complete Hand Book of Treatment Arranged as an Alphabetical Index of Diseases. By Wm. Aitkens, M.D., F.R.S. Birmingham & Co.: New York.

This book is made up of those portions of the chapters of "Aitkens' Science and Practice of Medicine" which describe the treatment of diseases. It is arranged alphabetically according to the names of the diseases. A brief definition of each morbid affection is given before the treatment is detailed. The work from which this has been compiled is so well known and has been so thoroughly established as an authority, that comment upon its contents is unnecessary. The book may be found useful, as keys, dictionaries, and indexes are, but like them, cannot be considered a treatise upon the subject.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-Fifth Annual Session. April, 1883.

The first fifty pages of this volume contain minutes of the annual and special meetings and the reports of the various officers and committees. The president's address is by Wm. M. Kemp, and following it is an admirable address upon Medical Bibliography, by John S. Billings. The report of the Section of Surgery is by Oscar J. Coskery, in which he attempts to "strike the balance" of present opinion upon the subjects of Gastrostomy, Splenectomy, and Nephrectomy. Dr. Richard H. Thomas made the report of the Section on Practice. This consisted of a carefully prepared and laborious paper, on the Influence of Season and Weather on the Death Rate from Diptheria in Baltimore. His conclusions will be of interest, and we will, therefore, copy them here:

1. "While the weather alone does not regulate the absolute number of deaths from diphtheria, it has an important hearing upon the rise and fall of the violence of the disease, although temporary fluctuations occur independently of it."

2. "*Temporary changes* in the weather *has but little* effect, but a *continued prevalence* of certain kinds of weather do cause a rise or fall in the mortality from diphtheria."

3. "The conditions favorable to a rise are, low barometer, low winds, especially from the east, high temperature with high humidity, and heavy or continued rainfall."

4. "The condition favorable to a fall are, high winds, especially from the west, low humidity with high temperature, or high humidity with low temperature and (generally) a high barometer."

Dr. Wm. T. Howard, in the report of the Section on Obstetrics and Gynæcology, first considers Trachelorrhaphy, its present status, the indications and contra-indications for it, Prophylactic and preventive measures, Primary Trachelorrhaphy. He then describes several cases of Vesico-Vaginal and Utero-Vesico-Vaginal Fistulæ. In the subject of Obstetrics, he calls attention to Axis-Traction forceps and describes Tarnier's forceps.

Under the heading, Report of Section on Materia Medica, is a paper by T. Barton Brune on Urinary Chemistry, in which he briefly describes all the more important advances in urinary chemistry made during the year. In the next article Dr. John S. Lynch describes his own tests of carbolic acid as an antipyretic, and calls attention to rubus procumbens in diarrhœa and dysentery. In regard to carbolic acid he says:

"I have used these doses in all kinds of fevers that have come under my notice during the last three years, and while I cannot say that it never fails, I think I can say positively that it fails less frequently than any other antipyretic with which I am acquainted, except, of course, the cold bath." His favorite prescription, especially when the pulse is very frequent, is one of carbolic acid, tincture of aconite root and glycerine, in which there are four or five grains of the first, about four drops of the second and

a teaspoonful of the last in each dose. In typhoid fever he regards it as especially useful as it keeps the temperature nearly normal and seems to prevent diarrhœa and tympanites.

Dr. J. Robert Ward makes the report of Section on Sanitary Science. Dr. T. S. Latimer in the report of Section on Anatomy, Physiology and Pathology describes the experiments of Chittenden and Ely on the influence of peptones and certain inorganic salts on the diastatic action of saliva. Also, Dr. G. L. Walton's experiments with methyl-kyanethine ; the experiments of Ringer on the influence of different constituents of blood on contraction of ventricle ; those of Brunton and Cash on the influence of heat on the muscles poisoned by veratria. The observations of Eckert on relation of blood-pressure to age are also given, and brief mention made of Dr. Whitfield Ward's opinion of the function of the velum and uvula, and the third blood corpuscle of Norris. The observations of L. C. Wooldridge on the relation of the white blood corpuscle to coagulation, and Gamgee's ideas upon the essential nature of secretion, are mentioned.

In the Section on Psychology, J. W. Chambers describes cases illustrating subcutaneous nerve stretching in the treatment of sciatic neuralgia. Dr. A. Friedenwald, Chairman of the Section on Ophthalmology, Otology and Laryngology makes a report for the Section. A paper on Laryngeal Stenosis, by H. C. McSherry follows this. An abstract of the next paper, by H. Newell Martin, on the Direct Action of Ethyl Alcohol upon the Heart has already appeared in this journal.

The next is an interesting paper on the Sewerage of Cities, by C. W. Chancellor. Some Forms of Laryngeal Paralysis are described by J. D. Arnold; a case of Dexiocardia by S. C. Chew. The prone position during operations upon the jaw is discussed by L. M. Tiffany ; hypnotism, by G. H. Boyland ; St. George W. Teackle relates some facts in regard to a a case of spontaneous cow-pox that occurred in Baltimore county, and experiments with the crusts from it.

The paper following contains Dr. J. N. Mackenzie's remarks on Naso-Aural Catarrh and its Rational Treatment. Malarial Fever in Puerperal Women is the title of the last article, which is by P. C. Williams.

NECROLOGY.

CRANE, CHARLES HENRY, M.D., Surgeon General of the United States Army. Was born in Rhode Island in 1825 ; died suddenly at his residence, in Washington City, October 10, 1883. He received his education at Yale College, where he graduated in letters in 1844. He then commenced the study of medicine, and graduated M.D. in the medical department of Harvard in 1847. Dr. Crane was commissioned Assistant Surgeon in the United States Army, February 14, 1848; served with the Second United States Artillery in the Mexican war ; was in the Florida war against the Seminole Indians to 1852 ; with a battalion of the Second United States Infantry in an expedition against hostile Indians in the summer of 1852 ; with First United States Dragoons in an expedition against hostile Indians in the summer of 1852 ; with First United States Dragoons in expedition against hostile Indians, and in protecting emigrant trail in Oregon ; distinguished in an expedition against the Indians near Rogue river, Oregon, 1856 ; on the Pacific coast to December, 1856 ; attending surgeon examining recruits and assistant to the Medical Purveyor, New York city, to September, 1859 ; accompanied Gen. Scott to the Pacific coast, September, 1859 ; was promoted to Surgeon, United States Army, in May, 1861 ; was Medical Director, Department of the South, to July, 1863 ; Medical Inspector of Prisoners of War, August to September, 1863 ; executive officer in office of the Surgeon General, Washngton. D. C.; Colonel and Assistant Surgeon General United States Army, July, 1866 ; brevet Lieutenant Colonel and Brigadier General United States Army for faithful and meritorious service during the war, and was made Surgeon General, July 3, 1882.

Gen. Crane had been sick for about three weeks, but was able to go to his office at intervals up to about a week ago, since which time he has been confined to his house. He was an officer of great executive ability, affable and courteous to all having business with his office, and universally beloved by the clerks of his bureau.

Surgeon General Crane was a man of fine figure, and until his late sickness was in robust health. His duties have been in Washington since the war, where he has a host of friends in social and military circles.

He was an honorary member of the "Medical Society of the District of Columbia," which, at its meeting on the evening of the 10th inst., passed the following resolutions :

"WHEREAS, The Medical Society of the District of Columbia have heard with profound regret of the death of Dr. Charles H. Crane, late Surgeon General of the United States Army, and an honorary member of this Society;

"*Resolved*, That in the death of Gen. Crane this Society, and the profession at large, have lost one of its ablest and most distinguished members.

"*Resolved*, That in the discharge of his official duties, his marked ability and devotion to everything connected with the advance of medical science, merit the highest commendation of his professional brethren.

"*Resolved*, That this Society tender to his family their heartfelt sympathy in their sudden bereavement."

Dr. Crane was one of the physicians at the death bed of President Lincoln, and his portrait is prominent in the well known picture of that sad scene. The Doctor leaves a widow and one child, a son. Funeral services were held at his residence, at 5 o'clock on the 11th inst. His remains will be sent to Rhode Island, and interred at Shelter Island.

J. M. T.

THE

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ORIGINAL ARTICLES.

STRICTURES OF THE ŒSOPHAGUS—THEIR NATURE AND TREATMENT, WITH CASES.

BY HENRY F. CAMPBELL, M.D., AUGUSTA, GA.

[Read before American Surgical Association, Cincinnati, O., June, 1883.]

The frequency of injury to the œsophagus, resulting in obstruction and disability of the tube for the entrance of food into the stomach, gives to this class of accidents, and the conditions arising from them, an importance well worthy the careful consideration of the surgeon. Few who have had the unhappiness to witness the gradual, or more or less rapid closure of this important canal; to note day by day the hunger, the thirst, the restlessness, the wild desire, the appealing calls for help and relief, and then the wan cheek, the anxious eye, the rapidly emaciating frame, all harbingers of a sure and agonizing death, can ever forget the scenes, of which they have been the unwilling witness, nor the cries of the victim—most frequently a child—as the painful echoes of a memory they would gladly efface.

In the discussion before this Association of a condition of such widely recognized importance and acknowledged difficulty, I might well be expected to enter into an extended consideration of the observations and experiences of others in both early and more recent times, carefully weighing and comparing their methods and devices for relief, as well as their views as to the nature of the affection, with my own, especially the opinion I hold in regard to the peculiarities presented by œsophageal stricture. This, in a paper like the present, I can only do to a limited extent, on account of the brief time allowed for the reading of communications before the Association. My object is mainly to present my own experience in a number of cases, which, though limited, has perhaps been more extended than that which falls to the lot of most surgeons in their private practice.

Besides two cases in which I was consulted casually, and others treated by my advice without a personal examination and after observation, I can at the present time report four cases treated by myself, and under my direction by others after the obstruction had been partially overcome. Of these four cases I am enabled to give the connected history from notes taken at the time, and to give the final result in each, as from the report of those who have had them under observation, and to whose care the continuance of treatment had been confided. It is on account of what appears to me measurably the satisfactory results of the treatment—dilatation, compared to that more recently suggested of incision, and also to urge the importance of all expedients for the nutrition of the patient during treatment, however protracted and slowly progressed in, that I am induced to relate these cases and make the present brief remarks.

The œsophagus proper is, as is well known, a musculo-membranous canal extending from the termination of the pharyngeal cavity, about opposite the circoid cartilage, to the cardiac entrance of the stomach, as generally considered opposite the ninth and tenth dorsal vertebræ. In descending, it slightly deviates in the neck to the left side, making it more accessible here to operation, and, it is thought by Cruvelhier, offering some obstruction, on account of the deviation, to the passage of instruments. The stricture is largely, indeed we may say principally, muscular, the fiber being of the striped or voluntary kind, though the functional activity of the canal is only partly voluntary, being largely reflex. This automatic activity is characterized, even in perfectly natural conditions, by a spasmodic quickness and celerity of contraction in the fibers not known in but very few instances to attach to involuntary movements. The existence of the striped fiber and also the quickness of the reflex activity is known to pertain more particularly to the upper portions of the tube,* where it merges into the pharyngeal cavity with its special muscular apparatus, and even more exaggerated reflex responsiveness to excitants. The disposition of the muscular structure of the œsophagus into layers of longitudinal and circular fibers while it admirably adapts the canal for its function of deglutition, and accelerating the progress of aliments downward to the stomach, also involves the liability to spasm and stricture under suitable conditions of the mucous membrane, which aptitude and liability constitute, as will hereafter be shown, the most important hindrance to the treatment of organic stricture of the œsophagus, as well as to the ingestion of food. This muscular apparatus and this sensitive lining membrane derive, as is well known, their sen-

* See paper by the present writer "On the law governing the distribution of the striped and unstriped muscular fiber."—Southern Med. and Sur. Journal, vol. vii, page 139, March, 1851; also, Transactions of American Med. Association, vol. iv, 1851, page 468: "Whenever celerity or quickness of action is required in a muscle, under any circumstances, we find the striated or more perfect fiber entering into its composition without any regard whatever to voluntary or involuntary motion." This law, the writer maintains, is of universal application, and explains the three exceptions—the existence of striated fibers in the heart and in portions of the œsophagus and pharynx. These were the exceptious that embarrassed the former law of striped fiber to voluntary and unstriped fiber to involuntary muscles.

sitiveness and excitability from an abundant innervation of the pneumogastric nerve—both trunks descending upon the side of the œsophagus and furnishing innumerable sensori-motor filaments to its muscular and mucous coats throughout its entire length. The normal action, then of the æsophagus, being one of alternating constriction and relaxation. it will be easily seen that under abnormal or traumatic irritation, as by the presence of an abrasion or ulcer, or by the existence of an organic stricture, however partial, it would be constantly liable to the occurrence of spasmodic closures in addition, which of themselves might be, for the time being, shorter or longer, of the most obstructive character. I mention this fact in connection with the instrumentalities concerned in their production, because this character of spasmodic closure, superadded to the organic stricture, was a pretty constant feature in all of my own cases, and doubtless is the cause of much of the obscurity attaching to the cases of others—and interrupting, apparently, the progress of treatment—when not fully recognized and met by some special method of dilatation to avoid the production of, and to overcome, the spasms.

It has been the habit, or rather the method of reasoning, adopted by most of those who have written upon the subject, in the discussion both of its nature and the treatment to be applied, to have before them as a model and guide, strictures of the urethra. This I can but regard as a most fallacious comparison, in which only an imperfect analogy and no real parallel exists upon which to base any safe conclusion as to either pathology or treatment. This misleading mode of reasoning, it is thought, may have induced some surgeons recently to adopt the division of the stricture as preferable to the slower, equally effectual, and far safer procedure of gradual and persistent dilatation.

While I cannot profess myself as giving full acceptance to the doctrine so popular with many of late, that incision, whether external or internal, is imperatively necessary for the relief of urethral organic stricture, I regard these operations as comparatively safe, and often commendable, to shorten and facilitate treatment in many obstinate cases. But such procedures are far different in strictures of the œsophagus—first, on account of the hidden character of the obstruction, inaccessible to direct observation, rendering such cutting operations uncertain and hazardous; and secondly, because the relations of this canal to the mediastinum, the aorta, and to the anastomosing arterial vessels throughout its entire length, would render an incision of even moderate depth extremely dangerous, and perhaps fatal by a penetration of the wall of the tube; and lastly, because in my own experience I have as yet found no single case which was not amenable to treatment and improvement, by early gradual and persistent dilatation, with instruments carefully adapted to the peculiarities of each case. Most of the cases are brought to the attention of the surgeon, it is true, only in an advanced stage of the obstruction, and not until the œsophageal disability and defective nutrition have caused an amount of emaciation and exhaustion which threaten death by starvation. But still, these patients can at times pass fluids through the stricture into the stomach. This is the ground of hope for almost every case. If any fluid, however tenuous and however small in quantity, can pass, it may be regarded as a matter of certainty that some form of instrument of carefully selected material can, by patient, careful, and persistent effort, be made to traverse the still remaining area or what may be regarded the gradually closing canal, and thus secure to the sufferer the prime condition upon which relief by dilatation is to be accomplished, viz., the possible perviousness of the stricture. Any case outside of malignancy in which this can be done is susceptible of relief, if not of permanent cure, by dilatation.

The causes of œsophageal stricture are known to be various. Malignant tumors and malignant degeneration of the walls of the canal, though in their results the most surely fatal of all obstructions, are not, I think, properly classed among true strictures of the œsophagus, as the term stricture would be applied to other canals of the human body.

As my own experience has been almost entirely restricted to cases arising from a single cause, and that cause of a nature capable of producing œsophageal stricture in its most typical form, we have no need to be concerned about the subject of classification in the present paper.

The rapidly increasing manufacture and almost universal purchase and use in the domestic life of certain classes of the salts of potash and soda—"concentrated lye"—in washing, scouring and other processes of cleansing render these active caustic preparations more frequently than all other causes combined, the terrible agents by which for some years past, and we greatly fear with increasing frequency for some years to come this fearful and often fatal condition of the gullet is produced. Concentrated lye and concentrated potash are so constantly reported by rumor and in the daily journals as well as by medical men, as the cause of death to children by the accidental or unwilling swallowing of these solutions, that the reflective and humane would gladly advocate some legislative enactment which would place them among the poisons too dangerous to be entrusted to the hands of the people, or to be used in their present forms as a common article of domestic life.

The four following cases will serve to illustrate the frequency of these accidents as produced by this class of agents as they also comprehend the principles and method of our treatment:

CASE I.—Polly, a colored woman, aged about 38 years, a servant of Mr. P. Fleming, of Augusta, was in the winter of 1856, the subject of gastric neuralgia, for which I had prescribed a sedative mixture in which chloric ether and bicarb. soda entered as ingredients; being suddenly seized with one of these gastric attacks she called a younger servant to pour out a wineglassful of the medicine from a bottle. On drinking the contents of the glass she was seized with the most distressing burning in the fauces and gullet and epigastrium, which caused her to vomit

with great distress the contents of the stomach and with it probably most of the caustic potash which she had thus taken by mistake.

I was called immediately to the patient, being only a short distance from the house. I caused her to take at once nearly half a tumblerful of olive oil taken from the table cruet. This was to saponify the alkali, and arrest the process of chemical injury to the mucous membrane of fauces and stomach. This was vomited in a short time only slightly changed in character and appearance. The dose was repeated and about a half glassful of the sweet oil was retained. Nausea and vomiting with burning pain in throat and epigastrium continued for many hours, but was relieved by morphine. Blood and bloody mucus soon began to appear in the matter vomited and expectorated. This patient began at once or within a few days to complain of great difficulty and "spasm in the throat" in all attempts at deglutition; even water was swallowed with great difficulty and pain, though, as she expressed it, it gave her delightful relief from the craving and burning thirst which all the time tormented her.

Deglutition, which was from the first painful and obstructed, in less than two weeks began to be for hours together, impracticable, and then rather suddenly and unexpectedly, she would find some of the fluid to pass into the stomach, but always slowly. The swallowing of solids and semi-fluids had been impossible from the time of the accident. Finding this woman rapidly becoming weak and emaciated and not then having the implicit reliance upon rectal alimentation which I now entertain, I determined to begin the process of gradual dilatation at once as an imperative necessity. There were evidently abrasions and unhealed excoriations somewhere in the canal, as was shown by the sanguinolent discharges coming up with the fluids returned on her attempts at drinking. Starvation was staring her in the face, and the face returned the stare with a fixed and abiding expression of hunger, anxiety and distress, which looked more like the glare of insanity than that of any bodily distress. On attempting to explore the gullet with an ordinary œsophageal bougie of moderate sizes I found the instrument produced much pain and wa, obstructed in the passage a little below the cricoid cartilage. There being much spasmodic action, a No. 10, and then a No. 5, gum elastic urethral bougie was tried, when the latter passed with some difficulty. This was allowed to remain for a short time, when the No. 10 passed without much more difficulty.

I now passed a conical flexible gum elastic French catheter, No. 10, beyond the stricture for the purpose of introducing water into the stomach. A glass of water and a glass of milk were thus injected to the great relief of the sufferer.

As the case progressed towards recovery, it was found that the improvement was often irregular, that is, the size of the bougie could not always be increased from one dilatation to another, but at the beginning of each sitting, a smaller size than the instrument last used, had to be applied before any advance could be made by the introduction of a larger dilator. This apparently discouraging circumstance in the treatment must certainly have been due to spasmodic action of the circular fibers, and not to any real narrowing of the space that had been gained, for it was observed mostly during the earlier periods of the treatment while yet the cicatrices were tender and irritable, and while perhaps there may yet have remained some unhealed abrasions or ulcerations at the point of injury. This spasmodic irritability continued many weeks, entirely preventing deglutition, even of fluids, and during which time the daily injection of one quart of milk through a catheter into her stomach was her only sustenance. This spasmodic closure of the gullet would ocasionally take place some months after she had been able to swallow both fluids and solids, and when the ordinary bulbous tube of the stomach pump could be passed with only spasmodic obstruction for the introduction of water or milk.

After having ceased treatment in this case, she having long since recovered completely the power of swallowing solids, she was taken to the upper part of the State by her employers. While there she was suddenly siezed with complete disability to swallow either fluids or solids. The neighboring physician was called in, and all his efforts being unavailing, he proposed that a *mesmerist* who was in the village should see her, saying she must die unless he could relieve her. On arriving and being informed of the nature of the case, he said he would try to relieve her, and called for a glass of water and a piece of corn bread, after which he "thoroughly mesmerized her," and handing her the water, he commanded her to drink it, which she did without apparent difficulty. He then desired her to eat the bread; she hesitated, then rather demurred, and finally ate the whole of it. After having lost sight of this patient for many years, I was sent for in haste, the message being that "Polly's old disease had returned upon her." Being unable to visit her at the moment, I sent her one of the ordinary œsophageal bougies she had formerly used, but the choking had ceased, and she did not find it neceasary to resume the self-treatment which had been pursued for a long time after leaving my immediate care.

These suddenly occurring and persistent obstructions to deglutition, relieved in the one case at the behest of a mesmerist, and in the other ceasing spontaneously, cannot fail to be recognized as being of a reflex or spasmodic character, affecting the circular fibers, no organic constriction could either occur or be removed so suddenly by any such influences.

Case 2.—Child of J. J. Anderson, Williston, S. C., aged about eighteen months, stricture of the œsophagus caused by drinking "concentrated lye" some months previously. At the time of first examination, August 16, 1881, the child was greatly emaciated, fretful and crying for water and food. On making attempts at deglutition, some of the food, cake and bread, seemed to enter the upper portion of the gullet, but would be returned in a short time with the water or milk taken, neither solids or fluids appearing to pass the stricture. The mother reported that the child had been unable to swallow any water or food for four or five days—which period of

disability she said was not uncommon as he had had several times before prolonged spells of "stoppage" at the end of which he would be able to get down water and milk, with difficulty, for several days at a time. She reported one of these spasmodic closures as lasting nearly nine days, during which the child had suffered great distress and nearly died of hunger. The extreme emaciation and exhaustion of the child, its present and constant distress from prolonged starvation rendered it important to proceed at once in our attempts at nutrition.

The child being held firmly and its mouth kept open, assisted by Dr. J. S. Coleman, a Fellow of this Society, a number six (6) bougie was passed, for the purpose of exploration, down to the stricture, which appeared to be a short distance below the cricoid cartilage. The instrument was arrested at this point, and after some cautious and delicate attempts to push it further, it was removed. It was covered with thick mucus, mixed with milk and softened bread crumbs, which the child had been attempting to swallow. A number eight gum elastic bougie, with a soft, flexible, and conical point, was now introduced, for the purpose of passing or entering the stricture if possible. The instrument being well lubricated with vasoline, was passed over the finger of the left hand holding down the tongue. No force was or could be used with this soft and very flexible instrument. When it became arrested at the point of the stricture, as the other one had been, it was slightly withdrawn and again gently propelled. This manœuvre being repeated several times, the point soon entered and passed the contraction, when it was with some obstructive compression pushed on into the stomach. On the removal of the bougie, the mother asked if she might give the baby some water, because, she said, "I see by his countenance he can swallow." She further stated that now being relieved, he would be able to take water and milk for some days, "until he had another stoppage." First water and then milk was given to the child, several wineglasses of which latter it was allowed to take. It swallowed slowly, but without much apparent spasm. The mother stated it would gradually be able to drink more freely.

As the great and most pressing object was the present nutrition of the child, the mother was directed to supply it cautiously with milk and beef tea or meat juice. We also directed that these articles should be supplemented by nutritious injections, if a sufficient quantity of fluid nutriment could not be taken naturally. No time was appointed for a second dilatation, but the parents were directed to bring the child whenever there was a recurrence of the spasm and disability. The child's vitality was so low, that I was not willing to interfere with its gullet as long as it could take nourishment of any kind for the improvement of its health. In about a week the patient was again presented, the same proceeding of dilatation with flexible conical gum elastic bougie, when the child was again relieved.

We found in the several repetitions made, that the instruments, though increased in size, passed more readily each time, and that the intervals between the spasmodic closures were longer, while the child increased in flesh and plumpness.

The season being unfavorable for a delicate child to remain in the city, he was sent home to the care of Dr. John Smith, of Blackville, S. C., who had referred the case to me. The following extract from Mr. Anderson's letter, dated November 19, 1881, four months after beginning of treatment, will show the favorable progress up to that time, both as to improvement in deglutition and general health:

"The baby is no better in regard to eating any solid food, but he can drink milk. He does not have those long spells of closure of the gullet, as when he was with you; and when he does have it, it lasts not more than an hour or two, or not more than half a day the longest. Dr. Smith has tended him ever since he left you, and has used the bougie a great many times. Sometimes when his throat is closed it gives relief, when at others it seems to do no good. He has increased surprisingly in flesh and strength, and can talk as plain as any child. He has not forgotten you, as small as he is. We can't keep him in church, or in any crowd of people. As soon as he gets there he begins to cry and say, 'The Doctor bother me'!

(Signed) "J. J. ANDERSON."

The above encouraging and measurably satisfactory account of the case reasonably gave hope of progressive improvement and of a possible ultimate recovery. In preparing our notes, however, for the present report, the information obtained nearly eighteen months after from Dr. W. W. Smith shows that the case afterwards resumed its former unfavorable characteristics.

WILLISTON, S. C., May 10, 1883.

DR. H. F. CAMPBELL—*My dear Doctor:* I received your letter the other day inquiring as to the treatment of James Anderson's child. I have been waiting to see Dr. John M. Smith to get a history of the case, but as I have not had an opportunity to see him, and not believing that he could give you anything interesting or profitable, I will just give you what I know of the case. From the time of drinking the concentrated lye, it lost the power of deglutition to a great extent, from which it never recovered. He used various remedies without any good effect. He was never able to effect anything by dilatation. It lived for some time on sugar alone, just as it would dissolve in the mouth, and finally died of inanition.

Yours truly, W. H. SMITH.

By a comparison of the above two communications, it is evident that the child had been for a time successfully treated by Dr. John Smith with dilatation, as the father reports his frequent and diligent application of the bougies, and the most decided improvement of the child in the deglutition and in its nutrition, and also the greatly diminished frequency and persistence of the attacks of spasmodic disability of the gullet. In cases of this most deplorable class there are many things which interfere with the progressive and ultimately successful treatment by dilatation. The alarm of the little patient at the bare idea of the insirument ("Doctor bother me," expresses it fully.) The disinclination of the parents to dis-

tress the child, so long as it can swallow any food whatever; the engrossing and crowding-out employments of the physician, often a village practitioner with a clientel extending over several counties of the State, all combined to render it probable that progressive dilatation and an overcoming of the spasmodic tendency will not be accomplished even after having been fairly inaugurated; but that on the other hand from time to time the systematic course will be interrupted. The amount of food ingested is so gradually diminished, and the emaciation so imperceptibly advanced, that by the time the parents in alarm compel the attention of the doctor, recontraction to the original degree has taken place, and all that has been gained, though not impossible of recovery, has been, under the circumstances, forever lost, and the child doomed to death by inanition, for want of a longer continued and more systematic treatment.

The note from Dr. Simpson Russ at the end of our next case cordially acknowledges his failure to perfect a cure on account of the hindrances to which we have just referred.

Case III.—Daisy Crouch, aged about two years, brought by parents early in 1882, with disability to swallow even liquid food except at long intervals and with great difficulty. The child was pale and languid, unable to stand and in a condition of extreme emaciation with an expression of anxiety and pain. Regarding it from its appearance to be a case of entero-colitis or cholera infantum, I enquired as to the frequency of its daily evacuations, when the mother told me that the child scarcely ever had an evacuation, as it never ate anything on account of its throat which had been injured by drinking concentrated lye. The exact date of the accident is not noted. The child was "playing round" at the spring where the grandmother was washing clothes. Unobserved, she suddenly took from the wash-bench a tin can of the concentrated lye and drank some of it. The effect was described as dreadful, the child crying and vomiting and bringing up mucus and blood, while every body thought it would die before morning, It finally got better, but was hardly able to swallow anything, and began "to perish away," when it was taken to Dr. Russ, of Graniteville, who, on account of its condition of impending starvation, brought it to Augusta for consultation. In nearly all these cases an examination is made with much opposition on the part of the little patient, and not without the exercise of a good deal of tact and persuasion seconded by more or less force. The child had attempted to drink water and milk, but from the quantity and instantaneousness of its rejection it was evidens that very little or none had passed into the stomach. Though greatly alarmed at the appearance of instruments, this languid little patient made no vigorous resistance to the introduction of the bougies, and a number six flexible conical bougie was, by delicate effort, passed beyond the stricture. This was soon followed by a No. 8, and then a No. 10. No pain seemed to attend their introduction, for after this the child was able to drink, first water and then milk. Being fully convinced of the value of dilatation in this case, as indicated by our first application, a selection of the proper flexible pointed gum elastic bougies from No. 8 to No. 12 was advised, and the patient returned to Graniteville to the care of Dr. Russ. In case of failure of deglutition, rectal alimentation was advised either as the sole and reliable means of nutrition or as supplementary to the small and precarious amount of food that could be carried past the stricture into the stomach.

Desiring to know the subsequent history and final result of the above case before making our report, I received the following brief and candid note from Dr. Russ:

Graniteville, May 15, 1883.

Dear Sir: Your card of inquiry in regard to little Daisy Crouch was received a few days ago, but I am not able to make any report, because she moved from here some weeks after you saw her, slightly improved. She returned a short time ago to this place, where her father is again employed. as *fat as a pig*, and seems to be perfectly well, but she is not able to swallow scarcely any solid food. I rather got tired of working with her at the time, it being so difficult to introduce the instrument on account of her aversion and fear of being hurt. I am satisfied that she could have been entirely relieved if the treatment could have been kept up. I am sorry that I cannot help you out much in the case, and especially as I am, to a certain degree, responsible for the failure.

Yours respectfully, etc.,

Simpson Russ.

From the above very imperfect history it will readily be perceived that treatment for only a brief period, together probably with the healing of the denuded surfaces and gradual subsidence of the reflex irritability, resulting in rescuing the little sufferer from impending starvation, and restored to the gullet a competent capacity for deglutition of fluid nutriment, and a slight capability to digest some solid or semi-solid food. Without the judicious use of dilatation at the time of greatest need, it is the belief of the writer that the reflex excitability, and the spasmodic closure of the canal, would have so entirely occluded the channel and shut out nutrition, as to insure the death of the child,—even though, as we have seen, the organic narrowing could not have been of itself entirely obstructive. I believe that a resumption and continued use of systematic dilatation would still further improve, or entirely relieve the child of its disability. The following case, though one of greater severity, and attended probably by more serious injury to the structure of the œsophagus, will illustrate the advantage of a systematic, regular, and prolonged treatment by dilatation:

Case IV.—T. L. Chance, aged 19 months, emaciation extreme and every indication of threatened dissolution from inanition. Stricture of the gullet, located apparently a short distance below the cricoid cartilage, had resulted from the accidental taking of a solution of concentrated lye. The child had for some time been unable to swallow any solid food, and very little water or milk. Of the four cases here reported this one was by far the most distressing to

contemplate, and offered apparently the least hope of benefit from treatment.

A near relation of the family, and one deeply interested in the child, said to me: "Doctor, we all felt certain that the child would die, and, as for myself, I often secretly wished that it could die at once, to end its terrible and helpless suffering."

By the cautious introduction of the ordinary blunt-end gum elastic flexible bogie, No. 8 in size, we ascertained the situation of the obstruction, but made no attempt to pass the stricture. A No. 6 gum-elastic bougie, with a very flexible, soft and attenuated end, was now carried into the gullet, and delicately manipulated up and down, at the point of constriction, till it had evidently entered the narrow opening. It was propelled on toward the stomach without meeting any perceptible hindrance, when it was removed, and a No. 8 was passed with little or no more difficuity than the first. For the succeeding three days no very decided advance was accomplished and the child was allowed to return home with its parents, after having furnished them with graduated sizes of the proper instruments by which they were instructed to cautiously continue the dilatation. Rectal nutriment, with meat broths and milk, was advised as a supplementary means of supplying nutriment. Observing in the parents of this child a clear intelligence and full comprehension of what was required, with aptitude and firmness to carry out the treatment, I thought best to advise that the dilatation be performed by them, as equally safe, less alarming to the patient, and securing more perfect regularity of application than could be expected from any medical attendant. With this view the dilatation was repeatedly done in their presence, and every step in the process carefully explained. The case, however, was remanded to the general care and observation of the family physician. Instructions to return to Augusta for further examination and advice when necessary was also given. The history of the foregoing case is perfected in the letter of Mr. Chance (father of patient) in reply to questions sent him during the preparation of the present report about six years after the accident.

LAWTONVILLE, GA., May 25th, 1883.

DR. HENRY F. CAMPBELL, Augusta, Ga.,—*Dear Sir:*—Yours of the 21st at hand. I will endeavor to answer your questions as best I can.

1st. Name of child, Thomas Lanier Chance.

2d. Age at time of accident, sixteen months.

3d. Date of accident, April 1st, 1877.

4th. Time elapsed between injury and beginning of treatment by Dr. Campbell, about three months.

5th. The difficulty of swallowing food began about a month after the accident.

6th. The child was emaciated to a very great extent, was nothing but skin and bone.

7th. There was a discharge of blood at times when I used the probang or instrument down the throat, to open the stricture—nothing like the lining of the gullet was discharged, but there was a very thick mucus.

8th. The first time I carried the child to you, I spent three days in Augusta—the next and last time only one day.

9th. We dilated the throat for about one year, once or twice every week.

10th. The child's present condition is very good. Has not been troubled in swallowing for about three years—only that while eating at times it will get choked, but for a short time. On taking a swallow of water or milk it will get all right.

11th. He is very healthy and fleshy at this time. I consider him all right so far as I know.

12th. We used injections of milk for about one year. We fed him only on very light crackers after he got so that he could swallow anything.

Please give me your opinion as to his future condition—as to what you think of the stricture ever closing again. Hoping you may be able to gain the required information from this, I am very respectfully yours. (Signed), R. C. CHANCE.

I have been, thus particular in securing and presenting, sometimes perhaps tediously, all the facts and minute details pertaining to the progress and the ultimate result of the four cases of œsophageal stricture from chemical injury, in order that the beneficial results of treatment by dilatation may be illustrated. By a careful review of these facts, I think it will be readily recognized that just in proportion to the regularity and prolonged application of the dilatation, till the capacity of swallowing solid food is attained will the benefit be progressive and the ultimate result satisfactory. Whenever, by the use of natural deglutition, the solid alimentary bolus can pass the stricture, the improvement is apt to be accelerated, for each such passage of the bolus is attended in a certain degeee with the same practically beneficial result of the bougie dilatation, and from that time on the reflex excitability gradually diminishes, until an occasional choking, at longer and longer sntervals, is the only trace left of the extreme and impendingly fatal spasmodic susceptibilities of the injured gullet. Timely and judiciously applied, dilatation, if continued even for a brief period, will often rescue the patient from impending death by starvation, and secure a food-way fully adequate for the purpose of nutrition. In a communication from Dr. B. F. Wyman, of Aiken, we have illustrated the great value of prompt measures, and the good results of systematic dilatation even with instruments but imperfectly adapted to the purpose. We condense the following summary from Dr. Wyman's letter.

CASE I.—Robert Brown, colored child, aged six years, had accidentally swallowed concentrated lye about one month before. His mother said his mouth had become very much swollen immediately after drinking the lye, and that subsequently it became very raw, and that he had been able to eat scarcely anything since, first on account of the soreness as she supposed, but during the last two weeks the mouth had gotten well, and yet he could not eat any solid food, and even fluids were swallowed with difficulty and as soon as he had swallowed (even a little milk) that it would be vomited up again. On this

account she thought his stomach must be still sore. Upon examining the child I found it exceedingly emaciated; in fact almost a skeleton. I requested that some milk be brought and the child allowed to drink it. He seized the cup with avidity, attempted to drink it but would strangle and the milk or some portion of it would regugitate through the nostrils. After using about half a tea cup of the milk, the greater portion being wasted in the attempt to swallow, the child almost immediately thrust his forefinger into his mouth as if to gag himself (in order to induce emesis) and the milk was vomited up. I at once suspected there was stricture of the œsophagus near the opening into the pharynx, and probably another stricture at its termination at the cardiac orifice—either that or there might be still an ulcer remaining at the latter point. On introducing my forefinger (which was unusually long and thin) into the pharynx I found almost complete absence of the aperture of the œsophagus, caused by cicatricial contraction. I proceeded slowly to overcome the stricture by gently inserting the first phalanx of my finger into the orifice; which after some trouble I succeeded in accomplishing. I then, by using a small probang, succeeded in clearing the passage to the cardiac orifice of the stomach. This procedure was kept up for about a month, the patient being fed on milk and lime water in a tablespoonful dose every two hours during the day for several days; after that some solid food was gradually allowed. This patient made a good recovery and suffered no further inconvenience so long as I kept him in sight.

Case II.—Martha Knight, colored girl, aged three and a half years, brought to my office for treatment, the parents of the child stating that sometime previously (I forget how long) the child had swallowed some concentrated lye and since she had been unable to swallow any solid food. I found the condicition almost the same as in case No. 1—great emaciation and considerable general debility. Upon examination found some stricture of the aperture, though not nearly as much as in case No. 1. I found very little difficulty in overcoming it so as to introduce the end of my finger, and by cutting down a sponge probang as small and pointed as possible, I succeeded in reaching the cardiac orifice. The treatment was the same as No. 1, and the patient made a good recovery. This child had no vomiting, simply regurgitations of food and liquids.

Dr. Wyman remarks further: "In connection with this subject I will state that I have seen several fatal cases resulting from the swallowing of concentrated lye. In all these cases death was produced by suffocation—the caustic lye causing swelling of the epiglottis, and upper portion of the trachea, thereby rapidly cutting off the supply of air to the lungs from œdema of the glottis.

THE FREQUENCY OF CHEMICAL INJURY TO ŒSOPHAGUS. FATAL CASES, AND OTHERS WITHOUT TREATMENT.

From the above, and from cases that have transpired within the knowledge of the writer, it may be justly inferred that the cases of chemical injury of the gullet, especially by concentrated lye which survive, to result in stricture, and apply for treatment, constitute but a *moiety*, while perhaps a majority die from the immediate effects of the caustic, or before any curable treatment has been made available.

Case VII. Child of Mr. Stephen Bush, of Edgefield county, S. C., one mile from Augusta. Concentrated lye was swallowed by the child. Fearful excoriation of the mouth, lips, tongue and fauces was produced. Œdematous swelling soon followed. Dyspnœa supervened, with closure of the air passage, and the child died in twenty-four hours, from œdema of the glottis. The case was observed and reported to the writer by Prof. N. C. Eve, of Augusta.

Case VIII. Austin, aged 18 months, child of Mr. T. A. Boyle, of Augusta, while in Nashville drank concentrated lye from a tin can where it had been used by a servant in scouring the floor. The child crawled to the can and drank a little before it could be stopped. Olive oil was given. Great excoriation and inflammation of the mouth and fauces resulted, and œdema of the glottis supervened. Prof. Duncan Eve, of Nashville, was called, but treatment was unavailing, and the child died in less than twenty-four hours.

Case IX. Walter, aged 6 years, son of T. W. Boyle, brother of T. A, Boyle. I was consulted in behalf of this child—a healthy boy of 6 years. He had found a can of concentrated lye in a closet, when 17 months old. He "took some of the lye in his mouth, when it was taken away by his mother." Great inflammation of the mouth and throat followed, but by application of oil the child recovered without stricture. I found in the case at this time some slight abnormality in the muscular apparatus of deglutition and occasional spasmodic movements. These symptoms were doubtless the result of the injury during infancy. As they were thought to be less marked than formerly, no treatment was instituted. This case is mentioned in connection with the preceding one, to show how liable to accident with these dangerous poisons are children, a second case occurring in the same family despite the warning and the alarm produced by the first.

Case X. Colored child, aged 2 years, drank by mistake "concentrated lye," used by the mother for cleansing pots. Much swelling of the mouth and throat was caused, and the child was in great agony. Mr. J. W. Panknin, prominent druggist of Augusta, who reports the case, prescribed olive oil, of which he furnished half a pint, to be taken freely. Subsequent history not known.

Case XI. Clarence Gordon, colored child, aged 2½ years, residence Augusta, Ga., drank solution concentrated lye. Mouth, tongue and throat severely burned; could not swallow for many days. Then took fluids with difficulty. The child gradually "perished away," and died about a year after the accident, no dilating treatment having been used in the case.

Case XII. Theodore George Tompkins, colored, aged 13 months, creeping to tin can containing solution of concentrated lye used by the mother in scouring the floor. Mouth, chin, and throat as far as

could be seen, "badly scalded." Child could only swallow water. Physician was called. Lead lotion was used to mouth. Child became extremely emaciated, and died in five weeks. No attempt at dilatation.

CASE XIII. Theodore Henry, brother of last case, aged 4 years. After death of the first child, concentrated lye was no longer used in the family. "Washing soda" was substituted. The child drank some of a strong solution of the soda. Much injury to the mouth and throat was caused, and the child pined away, and died two or three months after.

CASE XIV. Furnished by Dr. R. H. Baker, Augusta. A colored child aged 2 years, swallowed concentrated lye. Injury to mouth and fauces. Stricture, and inability to swallow followed. Case brought to Dr. Baker in extreme emaciation, and apparently too far gone for treatment, and was soon after reported by the mother as having died, six months after time of injury.

CASE XV. Furnished by Dr. G. W. Mulligan, of Washington, Ga. Lucy Williams, 4½ years old. This child had been in the habit of drinking water from a gourd. The mother had made a solution of the "White Rock" potash in a gourd, and left it, June 27, 1874, on a bench. The child, thinking it was water, drank perhaps an ounce of the very strong solution. The mouth, tongue and fauces found of a deep red color, with here and there ashen spots. Complains of great pain in gastric region. Occasional attempts at vomiting. The usual remedies used. Difficulty of breathing added, and on 29th the child died, asphyxiated, caused, I suppose, from œdema of the glottis.

CASE XVI.—Tommy, child of Mr. M. J. O'Conner, swallowed solution of concentrated lye, used by servant in scouring the floor, March 4, 1882, aged two years; lived fifteen months after taking it, dying May 20, 1883. Though suffering dreadfully in the earlier stages, no stricture was discovered until November, when milk sucked from a bottle was constantly regurgitated, and a stricture was discovered. For five, seven and even ten days at a time, after its first discovery, the child would be unable to swallow fluids, and nourishment was administered entirely by enemata of milk, when suddenly the power of swallowing would be regained, and for three weeks or more the child would be nourished again in the natural way. The mother, Mrs. O'Conner, from whom this account was obtained, reports that dilatation was tried by Dr. Edward Geddings without success. The spasmodic character of the obstruction in this case will be readily recognized from its similarity to Case II (Anderson's child), which has already been commented upon in this paper.

C. T., a girl five years old, with childish curiosity put to her lips a solution of potash kept in a bottle in the kitchen for cleansing purposes. The contact of the caustic with the mouth being painful, it was evidently withdrawn, and she escaped without serious injury.

Archie B., son of Dr. S. C. Eve, aged four years, observing, as he supposed, a can of condensed milk, of which the child was very fond, climbed to an upper shelf in a pantry, and thrust his tongue into the whitish semi-fluid mass it contained. His tongue was severely excoriated, but he experienced no further damage from the enterprise.

To this last collection of cases might be added two or more others occurring within the same limits of locality, concerning which, however, our knowledge is not accurate, except as relating to the fact that serious, and in one case fatal, injury resulted from the accidental drinking of concentrated lye. It may here reasonably be asked, why report a number of inconclusive cases, in which neither the treatment, nor its results can be recorded. To the implied rebuke we patiently answer: That though indeed the primary, and perhaps most obvious object of the present paper, is to study carefully the nature and treatment of strictures of the œsophagus, resulting from chemical injury, in the light of my own experience and observation, yet as an object scarcely less important, and far more widely beneficial is that of showing the fearful frequency of such accidents, and the fatality resulting from them, as will awaken an interest in the restriction of the sale and careless use of the caustics causing such direful results. Early in the present discussion has been foreshadowed our proposition that such humane and wholesome object should be attained through legislative enactments, either in the State or by the general government. This is an object appealing far more to the sanitarian than to the surgeon, though it is necessarily through the surgeon and the general practitioner that the deplorable history and frightful carnage—burning of the innocents—by this insatiate Moloch of the household must come.

THE SALE OF POISONS.

In nearly all the States, and throughout the dominion of enlightened people, if not in every one of them, laws have long since been enacted placing under the most careful and imperative restraint the sale of a considerable class of medicines, recognized as poisons by the druggist, by special provision or by their humane caution, this intelligent class of dealers carefully label as "poisons!" While often the addition of the death's-head and cross-bones proclaim to the unlettered and unwary the lethal nature of the drug they are about to handle; but how is it with the sale and distribution of these potent and destructive chemicals, to the ravages of which we have had so often to refer.

THE POTASH FIEND, "CONTINENTAL CONCENTRATED LYE," THE POTASH BALL, ET ID OMNE GENUS.

For many years past there has been growing up in this country, and possibly in England and other European nations, a trade of the most active, and probably to those engaged in it, of the most profitable kind, in cleansing agents, the intent and functions of which seem to be supplemental and additional to the soap trade.

This commerce deals almost exclusively with alkalies, and had extended to the Southern States, as many older citizens will remember, when nearly fifty yèars ago common carbonate of soda—"lump soda," as it was then called—began to be used by the wash-

erwomen, scourers, and paint washers as a quick and thorough remover of grease and dirt from soiled clothes, floors, and painted walls. This alkali was dissolved in varying proportions—generally a lump "the size of a piece of chalk," in a bucketful or washtubful of water, was the indefinite formula which guided the intelligence or the stupidity of those who used it.

The amount of labor in washing was lessened, and probably money was saved in the expenditure for soap; but this reckless use of the lye was early discovered to injure the texture of the clothing, and it soon became unpopular with housekeepers, so that no laundress could obtain employment who could be convicted of "using soda in the water." Many phases of the same labor-saving devices, all claiming a more excellent way and "not to rot the clothes," engaged attention and sometimes confidence for awhile, was tried, found wanting, and discarded by all intelligent housekeepers and honest washerwomen, on account of the injurious effects of all of them upon the clothing so treated.

It is unnecessary, as it would be inappropriate, here to follow a history of these various devices, for they cover a period of over half a century. At best, it was but a contest, in which laziness and dishonesty on the one hand were opposed on the other by watchful intelligence and enlightened economy. For once and for awhile the right did seem to triumph, but in later days the evil in another form again broke out, and has gained a more general and destructive spread than ever before, and, horrible to tell, with ghastly addition to its triumphs—the destruction of human life, swelling the bills of infant and child mortality, I do not hesitate to say, by hundreds every year in this country alone. At the present day there are manufactured and sold in this country two or three articles of the nature referred to, one of which at least has gained a fearful prominence in the sad catastrophes which have attended its careless use, or, as would appear, its *misuse*. Concentrated lye is an article, the exact process of preparation of which is not known, except, we suppose, to the manufacturers. It is sold in painted tin cans, covered by a white label. On the labels of that which appears to be the most popular brand, is printed, after the manner and intent of a trade-mark, "Continental Concentrated Lye." Directions are given in French, German and English, for the making of soap by the use of the contents of the can in gallons of water with pounds of fatty materials. The large amount of water and grease it is capable of saponifying, would alone indicate to the scientific its concentrated strength as an alkali, and consequently its destructive energy as a caustic. The report of cases in the present paper, as well as the invariable results of all accidental swallowing of it, fully prove how direful and destructive are its effects; and yet on no part of the label or can, nor on any wrapper enclosing this terrible poison, is there the least intimation that danger or death, or injury of any kind, is to be even suspected! This can, with its white cover, illuminated label and finely printed directions, and closely resembling in form and size a can of condensed milk, or corned meat, or choice comestible, is sold as freely and unrestrainedly, with no more questions asked and no more cautions given, than in the sale of the most innocent and harmless article of food and luxury.

In ninety cases out of a hundred its professed and legitimate intent of soap-making is never carried out by the purchasers, but in various ways it is most ignorantly, carelessly and dangerously handled. The can is left open, strong solutions are made of portions of its contents for various purposes of cleaning, and it is not surprising that the unwary and the innocent should fall victims to their ignorance of danger in the cup. or to their infantile curiosity.

"*The star ball potash*," unequaled for purity and strength, is another preparation rivaling in commerce and domestic use the concentrated lye. It consists of a mass of potash enclosed in a coating of rosin, like the concentrated lye. Though its professed object is the making of soap, it is much more largely used as a cleanser. After being made into a solution of various strengths, it is perhaps less liable to entrap and deceive than the lye, but is handled with equal freedom and carelessness in families, and is not the less capable of destroying life than the one we have shown to have been so fatal in the Southern States.

In the present paper we have depended upon the dozen or more cases collected, most of them within a circle of not over twenty miles in extent, for what is supposed to be adequate illustration of the frequency of the accident arising from the unrestricted sale and careless handling of these caustic preparations. Had the usual and more thorough plan been adopted of sending interrogatives to the members of the professson to elicit individual observations and experience on the subject, it is believed the record would be a most frightful one, in which cases of death or injury, instead of a dozen, could be counted by hundreds throughout the South, and perhaps in all sections of this country, nearly all arising from the same cause. What better could be expected? These caustics are sold in every grocery-store in every city, village, hamlet and cross-road of the country without caution or even hint of their destructive nature. To earnestly call attention to an influence so adverse and dangerous to the public health, and to ask from the sanitary authorities that protection for the people which all good governments are bound to give, has been in so far the principal object of our discussion. While in the foregoing we have not presumed to formulate any act or provision looking to the control of the sale and use of the dangerous caustic alkalies, we would suggest that the attention of the National Board of Health be called to the importance of securing from the general government some leglslative precept or command by which manufacturers shall be compelled, in view of the perversion of their intent ot the article as to soap making, to have ineffaceably stamped upon the tin can containing the concentrated lye, and written indelibly on their labels the word "*poison*," and for the unlettered, that everwhere recognized warning against danger—the death-head and cross-bones—the black flag declaration of war against humanity.

Some equally effectual warning should be attached

to any form of package in which such poisons are sold. Why should strychnine, arsenic, belladonna, and even laudanum, to be handled only by scientific druggists and physicians, be so marked, when this more frequently fatal agent, handled principally by the comparatively ignorant and uneducated, be cast upon the people with no caution, warning or even hint of danger?

TREATMENT OF ŒSOPHAGEAL STRICTURES AFTER CHEMICAL INJURY.

Though in the history of the four cases forming the basis of this paper the methods and devices of treatment by dilatation have been more or less particularly dwelt upon as the only course found necessary in what appeared to be several extreme cases, it is thought best to consider the comparative advantage and the dangers of some of the surgical operations that have been recently practiced. These are internal œsophagotomy, œsophagostomy, and gastrostomy. Each one of these has been practiced in cases wherein there was a real or supposed impossibility of pursuing dilatation to a successful result. In some of the cases in which these cutting operations have been performed, as in obstructions by tumors and cancerous affections of the tube, œsophagostomy or gastrostomy were the only resource, if any attempt at surgical relief was to be made. Such cases, however, do not come within the purview of our discussion, as not properly to be classed as strictures. Internal œsophagotomy, then, as the only surgical operation claimed to be applicable in the class of strictures we are discussing, is the one which may here be considered. Dr. Morell Mackenzie[1] and Dr. J. O. Roe, of Rochester, N. Y., are the two surgeons who have more recently and prominently practiced internal œsophagotomy in cases of stricture and other obstructions of the gullet, while the record of previous operations by others have been given by them. Dr. Roe[2] regards the operation as "one which must take its deserved place among the operations in the œsophagus," and the published statistics of the operation show that it has been performed from the time of Maisonneuve's three operations, 1861-'62, to his own two quite recently, some fifteen times. Dr. Mackenzie, though reporting one measurably successful operation of his own, yet discusses these, and the results of all internal œsophagotomies by others, in the most candid, impartial, and circumspect manner, and thus we are enabled to compare continned and progressive dilatation as presented in the four cases of the present paper with the result of some fifteen cases in which dilatation was attempted to be supplemented and facilitated by the division of the stricture with the œsophagotome. In his own case, that of a man, the incision was made in the mid line behind, dividing the stricture from below upwards. "There was no serious pain, but in a few hours the patient began to feel some discomfort over the base of the right lung, and unmistakable signs of pneumonia soon afterwards showed themselves. Having continued to manifest signs of pulmonary disease from the time of the operation, the patient died three months after, and at the post-mortem both lungs were found considerably congested, and presenting patches of pneumonia. The right pleural cavity contained a large quantity of sero-purulent fluid. Commencing about one inch below the cricoid cartilage, and extending downward for three inches, the walls of the œsophagus were found to be slightly thickened, hard and uneven on the inner surface, the lumen of the gullet being considerably restricted for that extent. At the lower part of the stricture an incision about one inch long was found extending through all the coats of the tube below, and through the mucous and part of the muscular tunic, for the upper half of the length, the wound showed but little signs of cicatrization." Dr. Mackenzie remarks on this case that "the pulmonary inflammation to which he ultimately succumbed came on so soon after the operation that it is most probable there was a causal relation between the two events."

The occurrence of structural and inflammatory changes in parts and tissues, distant from the seat of both the strictures and the operation has been quite a frequent sequence upon internal œsophagotomy, and in many of the cases under circumstances in which a perforation of the coats of either the gullet or the stomach could not be charged with this result. Besides others mentioned both by Dr. Mackenzie and Dr. Roe, two of Maisonneuve's three cases were found to have died of peritonitis, one of them died the eighth day after the operation. There was intense peritonitis, the origin and source of which, says Dr. Roe were entirely unknown, though the cause seemed to be in the pelvis. In one of the Studsguard's cases a girl eight years of age, who had swallowed lye and was operated on by internal œsophagotomy, the incision being made from above downward through a strong elastic obstruction, two hours after had some pain in the cardia and back, relieved by throwing up some clear blood. Her voice got thick and she could only speak with difficulty, and three times in the afternoon there was much oppression in the chest and dyspnœa, so much so that she grew bluish red in the face, and it appeared as if she would suffocate. In the last case of Studsguard's we have functional disturbance in the lungs and stomach, which being distant from the seat of the structure and the operation could not have been caused by a perforation of the tunics of the gullet, and of which otherwise we have no evidence. Leaving out of our consideration for the present the more obvious (and momentous) dangers of the operation candidly admitted by Mackenzie and Roe, such as perforation of the wall of the gullet, resulting in fatal mediastinal or pleural abscess, exhausting hæmorrhage and œsophagitis. I have grouped together the class of sequences as above seen in order that they may be recognized as liabilities and dangers inseparably attaching to any internal œsophagotomy, according to the plainest and most unanswerable physiological reasoning and experiment. No one familiar with the experimental researches of John

[1] Dr. Mackenzie refers to two successful operations by Dr. E C. Berg, of New York, in *Arch. of Laryngol.*, Jan. 1883.

[2] See *N. Y. Med, Record*, Nov 11, 1882.

Reed and others upon the functions of the pneumogastric nerve can fail to find in these results the true interpretation and the probable cause of the phenomena referred to as the not infrequent results of section, or injury of the par vagum, pulmonary congestion, parenchymatous infiltration, pseudo-pneumonia, crepitant râles, dyspnœa and a disturbed circulation in the structures supplied by the branches of the several trunks, are all familiar results of experimental section of the trunks of the pneumogastric.

As from the beginning of the present paper, the pneumogastric has been recognized as a most important factor in the production of reflex tonic, and enduring spasm (*spasmus tonicus*) of the circular fibers which the writer claims it is impossible to distinguish from organic stricture, and which produces the fatal result by starvation, he believes more frequently than the inodular kind. So we now wish to call attention to the fact that it is to the wounding or section of the trunk of the pneumogastric, or of some of its more important branches in internal œsophagotomy that are due the functional and structural changes in the vital parts to which it is distributed, and to call attention to this as one of the most momentous risks to be incurred in the operation as at present devised. We are instructed that the safest line and the only one that ought to be adopted for the incision is along the middle of the posterior wall of the gullet. Leaving out of view for the present the abundant blood supply along this wall, by reason of the anastomotic chain of the aortic œsophageal arteries, rendering incision here most liable to hæmorrhage, as it has often been found, and also the tendency to future spasm which repeated wounding of the sensitive mucous lining will produce, let us recognize a danger here before not mentioned, but obviously as much or more to he dreaded even than hæmorrhage: The trunk (*œsophageal plexus*) of the right pneumogastric nerve applies itself to the posterior wall of the gullet, at the arch of the aorta, and is conducted through the posterior mediastimum to the cardiac end of the stomach on that aspect of the tube, while the left trunk of the pair pursues a similar course on the anterior surface of the gullet to the pyloric end of the stomach, where they both supply that organ and become tributary to the solar plexus of the organic system of nerves. In their course downwards they each supply abundantly the lungs of their respective sides, while to the œsophagus multitudinous filaments are furnished to the muscular and mucous coats. In Dr. Mackenzie's operation the incision having been made according to rule upon the posterior wall of the gullet, closely to which is attached the right trunk of the pneumogastric, it is a significant and apposite sequence that crepitant and moist râles and dyspnœa with serious pulmonary disturbance continuing for three months corroborated by a *post mortem* showing pulmonary infiltration and pneumonic patches, should have followed the operation—all these pertaining almost exclusively to the right lung, or that supplied by the nerve which if cut experimentally would have resulted in these same functional and histological changes. As to the peritonitis and other disturbances of the abdominal viscera, though in the opinion of the writer they can be legitimately attributed to the same cause, he will, after suggesting the explanation, leave it to the decision of others to adopt or reject the induction; but it will be remembered that the gastric branches of this pair are distributed likewise to the omentum, spleen, pancreas, liver and gall bladder, and that the pneumogastric is profoundly concerned in the circulation and functional activities of the abdominal viscera. *

Such then is the "causal relation between the two events" distinctly recognized, but not explained, by Dr. Mackenzie; also applicable, we think, to the peritonitis in Maisonneuve's cases, viz.: Section or injury of the right pneumogastric nerve at the time of the operation.

Thus it will be seen, in the mind of the writer at least, there is added another momentous danger to warn us against, if not to forbid entirely the operation of internal œsophagotomy and leading hence to the acceptance of the carefully weighed estimate given by Dr. Mackenzie in regard to the three procedures of œsophagostomy, gastrostomy and internal œsophagotomy. "From an examination of the results of the published cases, internal œsophagotomy does not appear to be a very satisfactory operation. Of the seventeen cases in which it has been practiced, four died, *i. e.*, 23.5 per cent. This estimate includes only cases which proved fatal within fifteen days of the operation; the mortality would doubtless appear much higher if all the cases were counted in which death, though directly traceable to the operation, did not occur within the above mentioned period." * * * * "As regards internal œsophagotomy, increased experience will probably show that, though its immediate results are not so frequently fatal, its ultimate effects, when successful, are less beneficial to the patient than those of either gastrostomy or œsophagostomy." To which may be added that, considering all its dangers to life, its doubtful permanent utility, and the encouraging results of dilatation, it is an operation which hereafter must depend upon either enterprise or desperation for its adoption, and upon only accident for its success.

CONCLUSIONS.

The following results may be summarized from the foregoing discussion of œsophageal strictures from chemical injury:

1st. That in the definition and classification of stricture of the œsophagus, all obstructions to deglutition resulting from morbid growths or sarcoma, carcinoma, or from abscess or aneurism, bearing upon the walls of the tube, and diminishing or obliterating its cavity by extraneous pressure, should be eliminated, and that the term should be confined to narrowing from histological or functional changes occurring in the structures of the wall itself.

2nd. Of stricture proper, as in other canals, the forms of organic and spasmodic exist; but in the

* In the Ophidian reptiles the pneumogastric takes the place of the organic system, and it has ever been recognized as a controller of vascular action in the organs to which it is distributed. Till recently it was known under the significant name of "the lesser sympathetic system of nerves."

œsophagus, on account of its muscularity, abundant supply of sensori-motor nerves and its functional intent of reflex activity—spasmodic strictures are almost invariably found to attend and to complicate the cicatricial or organic form, and often to occlude the tube under abrasion and injury when organic strictures do not exist, in a degree of themselves to disable deglutition.

3d. That in cases of prolonged œsophageal disability resulting in extreme emaciation and impending death, the fatal obstruction is the result more frequently of the spasmodic element, than of the inodular deposit imbedded in the walls of the tube, which narrow it, but seldom alone prevents fluid ingesta. It is the frequent and long enduring attacks of *spasmus tonicus* lasting often from three to ten days, obstructing the passage of instruments and preventing nutrition, that is apt to mislead the practitioner, and by repetition compass the death of the patient.

4th. That a careful consideration of the anatomy and normal functional activities, as well as the habitudes and intent of the œsophagus, will corroborate the above views:—for in its last analysis the normal act of deglutition is but an alternation of contractions and dilatations, by reflex excitation of muscular fibers.

5th. That the assumed analogy between urethral and œsophageal strictures, upon which the pathology and treatment of the latter have been based (Maisonneuve), fails in so many important particulars as to render the one a misleading and dangerous guide in the management of the other. In the one, spasmodic strictures are almost entirely confined to a particular and restricted region; while in the other, on account of its universal muscularity, its abundant nervous supply and functional reflex activity, spasm in the circular fiber, of the most enduring and tetanic character, and indistinguishable from organic stricture, is apt to be excited in all portions of the canal, by irritation of the mucous lining.

6th. That these spasmodic ring-contractions are liable to be mistaken for, and incised as organic strictures, detrimentally wounding the sensory filaments, thus increasing the number of points for the excitation of future tetanic constrictions.

7th. That the assumption of a guiding analogy between internal œsophagotomy and internal urethrotomy[2], will at once be recognized as still more disastrous and dangerous, when the important anatomical differences, and consequent risk, are to be considered. On the one hand, incisions in every part of the urethra, to any reasonable or even unreasonable extent, are not necessarily fatal, as both hæmorrhage and extravasation can be controlled, or guided to a harmless result; while with the case of the gullet, surrounded by and in close contact with vital parts, inaccessible to styptics, and the only dependence for arrest of hæmorrhage being spontaneous cessation, the fatality resulting from a penetration of its thin walls; and lastly, the section or wounding of the par vagum, almost unavoidable—all combine to demonstrate that in the plausible analogy there is no parity whatever, either in conditions or results.

8th. That in cases so desperate as to require a cutting operation, on account of failure in every possible method of nutrition, gastrostomy would be less dangerous, and more permanently beneficial, than internal œsophagotomy.

9th. That in view of the spasmodic nature of the affection, early progressive and long-continued dilatation is, par excellence, *the treatment* for œsophageal stricture resulting from chemical injury; that the dilators used should be smooth and flexible, attenuated at the gastric extremity, and scaled as to size from filiform to that of the full diameter of the normal gullet.

10th. That dilatation may be begun as soon after the injury as inflammatory conditions will permit. The existence, or supposed existence of abrasions or ulcerations in the mucous membrane; should not delay the beginning of dilatation. The contact of the dilator, instead of increasing, actually lessens the liability to tetanic spasm, by exhausting the reflex excitability of the morbidly sensitive membrane. Hypodermic sedatives will often assist, by relaxing the tonic rigidity of the circular fibres.

11th. That the practice of dilatation should in each case be instituted and continued by the surgeon until fully established, after which it may in many cases be intrusted to the patient himself, or if a child, to the intelligent parent or nurse, under the surgeon²s supervision.

12th. The length of time during which dilatation should be practiced cannot be limited to any particular period. After the deglutition of solids has become practicable, dilatation may be less frequent, as the passing of the alimentary bolus will adequately replace the action and intent of the bougie, in overcoming morbid sensibility and in restoring the natural reflexes of the tube.

13th. That during the treatment of dilatation rectal alimentation will be found a valuable means of supporting the patient; and since the recognition of retrostalsis as the rationale of intestinal ingestion, not only of fluid, but of semi-solid and solid aliments and since it is known that life and health have been maintained during five years by milk, eggs and meat pulps placed in the rectum, no case, even of complete and permanent closure of the gullet could be justifiably subjected to the dangers of any cutting operation for the object of nutrition until after the failure of systematic rectal feeding as an adequate and permanent means of supporting life, certainly no more unnatural and less objectionable than the dangerous expedient of making a mouth through the abdominal wall—gastrostomy. As a large majority of the cases of chemical injury to the gullet have been found to result from the carless sale and ignorant use of alkalies applied to domestic purposes and as such sale and use is more liable to increase than to diminish in the future, the legislature of each of the States and the national Congress should be petitioned through their several sanitary organizations to enact stringent laws requiring that all packages of such dangerous articles thus distributed among the

[2] It cannot be denied that this was the starting of internal œsophagotomy with its originator, M Maisonneuve.

people shall be plainly marked with the word "Poison" and for the warning of the unlettered that the death-head shall also be prominently emblazoned upon the can, box, wrapper or other containing enclosure.

THE RESTORATION OF THE PERINÆUM BY A NEW METHOD.

BY HENRY O. MARCY, M.D., OF BOSTON.

[Read in the Section on Obstetrics and Diseases of Women.]

The anatomy of the perinæum has within the last few years become fairly well understood, and its importance demonstrated to be greater by far than was earlier supposed. The perineal body is now recognized as an anatomical entity, and is the key-stone in the arch of perineal support. Its physiological importance in parturition has been well demonstrated recently by Dr. Hart, of Edinburgh,—an understanding of which will do much to lessen the frequent occurence of perineal lacerations. The lesion when partial is often overlooked; indeed, the gynæcologist, from his standpoint of observation, is inclined to feel that the injury, when it does not involve the sphincter ani, is in the majority of instances unrecognized. The two anatomical points most important to bear in mind in reference to the vagina and its value as a column of elastic support to the uterus, is that normally its walls, which are in close apposition, are near the vulvar outlet flattened laterally, but for the upper two-thirds of its length in the antero-posterior direction. Again, this vaginal sup-support is normally a curve, the convexity of which is toward the sacrum, and this adds much to the elasticity, and thereby aids in holding within certain limits the uterus, which in health changes its position with every respiration and movement of the body. When the uterus is in its proper position this vaginal support is applied to the lower segment of the organ behind its center of gravity, as swung upon its lateral ligaments, and thus keeps the uterine body as it were anteverted—*i. e.*, thrown forward of its lateral moorings.

When the perineal body is ruptured the walls of the lower segment of the vagina no longer retain their close apposition, but become relaxed to such a degree that in certain movements of the body they are separated; the antero-posterior vaginal folds slowly become everted, the cervical support is lost, the uterine axis is changed to a line with that of the weakened vagina, and then serves as a wedge, acting from above downwards to separate its walls already weakened, and thus may follow in procession the whole train of ills known by the various names—retroversion, retroflexion, prolapsus, cystocele, rectocele, with the changes of circulation, innervation, nutrition and disordered function of the whole pelvic viscera.

We will not now discuss the history of the operation, or the various methods from time to time recommended. Since these have been very numerous, and as the operation as still practiced varies in many of its details, it would seem to show that as yet no one plan has been determined upon as of superior excellence. The very imperfect results obtained teach that either the operation is very difficult or the methods put in practice imperfect. The chief defect where union has been obtained lies in the fact that the perineal body has not been restored, and the resulting perinæum is thin and yields excessively when put to strain, and this is often true when the vulvar-orifice has been sufficiently closed. When the laceration involves the sphincter the common failure after repair, is a vaginal opening into the rectum just above the sphincter muscle.

The use of the interrupted stitch is almost universal, no matter in what other manner the operation may vary. To this I have long attributed in a very large share the defective results, and have thought it might be remedied by the complete and careful approximation of the edges of the divided or refreshened surfaces. However, this allows a possible separation of the parts, with retention of fluid and consequent failure. The stitch may be taken so loosely as not to draw upon the enclosed portion and not lessen the depth of the triangle, but in this instance the tension is so little there is great liability to lateral separation and imperfect union. The end theoretically to be attained is simple approximation and retention, with complete rest of the parts without compression or distortion. This can never be secured by the ordinary loop of the stitch, since the force applied *must* act equally in every direction upon the enclosed portion. This is evidently true, no matter what the material used, iron or silver wire not excepted, when sufficiently plastic or yielding to accommodate itself to the surrounding parts. In homely illustration, it is the string to the bag, the opening to which is narrowed or occluded, dependent upon the tensile force applied. This is as self-evident in the stitch as in the ligature, except in the degree to which the constriction is carried. Other causes of defective results, usually very little emphasized, lie in imperfect approximation of the edges of the rent or refreshed parts, lack of care in the protection of the wound from the vaginal secretions, and the direction almost universally given to the patient to restrain the action of the bowels for a considerable number of days, or until the repair processes are quite advanced.

For a considerable period I have brought the edges of the wound into coaptation by the use of the over-and-over or continuous stitch, with the same care as exercised in a facial wound, using animal suture, since this requires no subsequent removal.

The profession is indebted to Dr. Jenks, of Chicago, for that which I consider a material advance as a substitute for the usual denudation or refreshing of the parts in sutures, where the sphincter ani is not involved. It consists of a careful separation of the mucous surface from the subjacent parts without involving its integrity, and after the approximation of the denuded surfaces in the usual manner this mucous flap is allowed to fall back upon and over the wound. This is an effectual protection from vaginal secretions. In a number of instances I followed this method with most satisfactory results. The nutrition

of the flap never failed, but shrinking and shriveling, it remained as soft mucous folds adherent to the vulvar orifice. The dissection may be made without much difficulty with a sharp knife of almost any shape, the recto-vaginal septa being kept tense by two fingers in the rectum. After a primary incision a probe pointed knife is to be preferred. A good pair of scissors answers equally well.

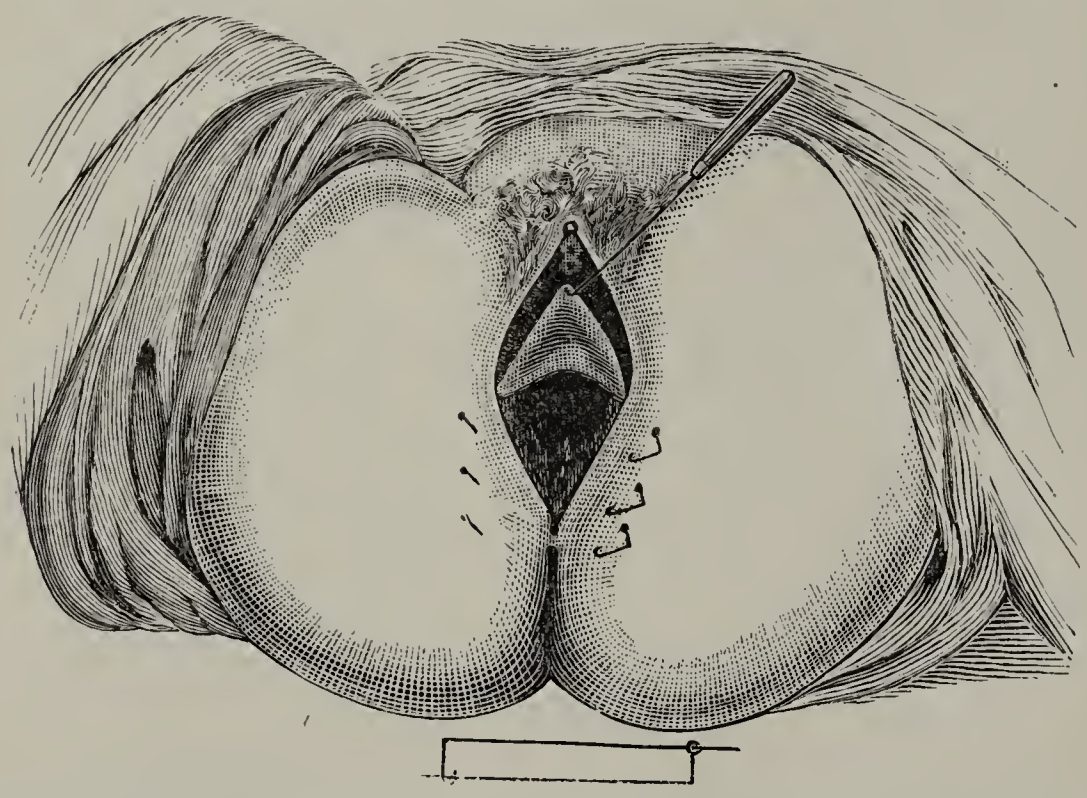


Plate I represents the denudation completed, and the pins already inserted ready for coaptation and fixation by clamping.

More recently I have separated the parts in a deeper layer in order to furnish a better nutrition to the superior flap, the surfaces of which are also approximated, and consequently the perineal triangle is considerably deepened and strengthened. This reduces the open wound to the shorter side of the triangle, and lessens the dangers from infection to a marked degree.

When the rent involves the sphincter and rectum the parts are divided laterally in the same manner, commencing on the line of the V separation, and each of the upset coapted sides of the triangle brought into careful approximation with continuous animal suture beginning with the rectal side.

Dr. Alexander Simpson, of Edinburgh, recommends bringing the refreshed parts into apposition, when the laceration is complete, by interrupted sutures taken from each of the three sides, since he has recognized that thereby he avoids the too usual rectal fistula at the point just above the sphincter muscle.

Dr. Emmett has observed that the tensile force of the stitch acting from above downwards, since this is the point of fixation, is liable to drag upon the upper angle of the wound, and thus produce a fistula; this he would prevent by an overlapping of the stitches. To obviate this difficulty, which we have above endeavored to show must pertain in a greater or less degree to the contracting force of the stitch, no matter how taken, and which must give a result more or less defective and often productive of complete failure, we have thought to apply the retaining power only laterally, and this by a process which at least by its simplicity must commend itself to all.

It is effected by means of a double pin, the halves of which are nearly alike. It is made of German silver wire, gauge No. 20 or 22, because this material does not irritate the tissues and possesses stiffness and elasticity, qualities which are essential. The end is bent in a small loop and turned one-fourth of an inch therefrom at a right angle, and the shaft is two to two and a half inches in length, and sharpened like the point of the needle of a subcutaneous syringe.

The one-half is introduced from the vagina *within* outward quite deep into the connective tissue laterally, the direction being determined by the finger placed in the rectum, to which the pin should be parallel. The other half of the pin, similarly constructed, is introduced from *without* inward upon the opposite side in the same manner, the point of which is caught in the loop of the first part and adjusted without. Thus a kind of "safety-pin" is constructed, and when fitted to retain properly the enclosed portions the loops are clamped down by compression forceps, and the ends cut square. This is found to hold sufficiently firm, but at first, fearing it might not be secure, I also clamped a perforated shot upon the wire. The shot renders the end of the pin less liable to cause irritation. If properly adjusted the elasticity of the wire compensates for the collateral œdema and does not impair the circulation in the enclosed parts, while complete approximation is obtained and no force is exercised in the direction of the long axis of the triangle. Two to four pins are required, as the case may demand. The subsequent treatment consists in most instances of a daily washing out of the rectum by means of a large double rubber tube with

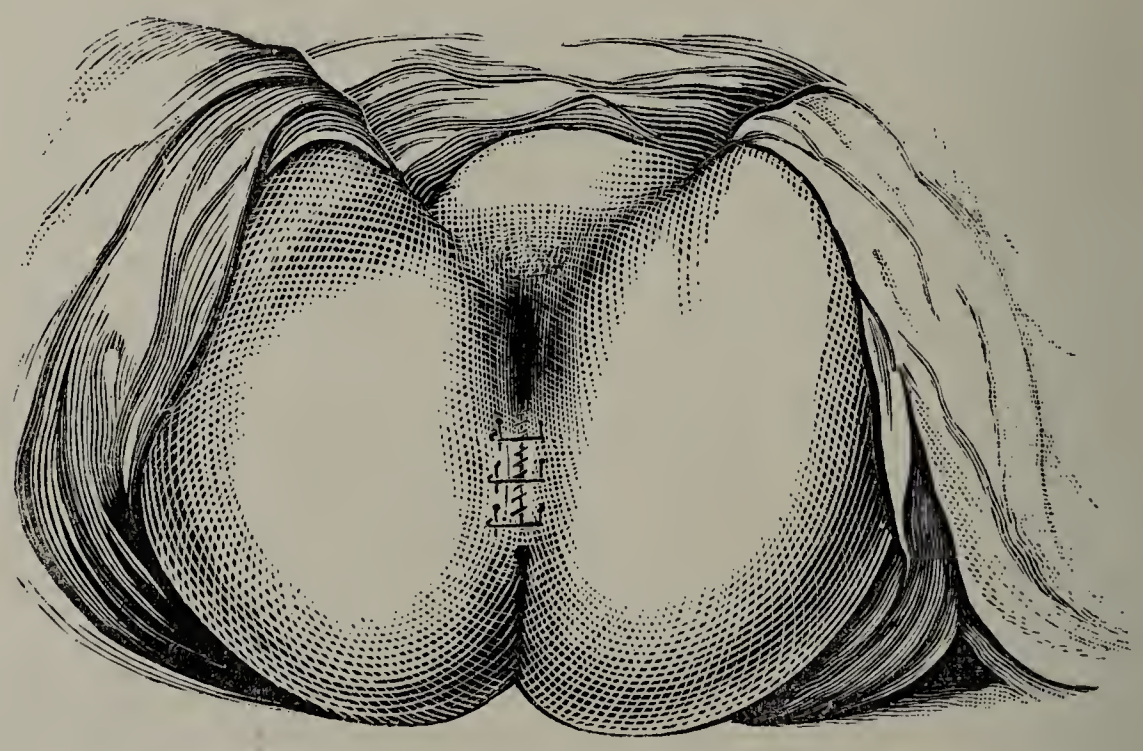


Plate II shows the operation completed and the careful adjustment of the edges by the over and over fine suture.

a considerable quantity, usually three or four quarts, of water as hot as comfortable to bear. Upon the eighth or tenth day, as thought wise, each pin is gently pushed upwards and the vaginal end exposed. Each side is then cut off near its juncture and withdrawn. I have used this support thus applied to the repaired perinæum only during the last eight months, and in six or seven instances. I grant these cases are far too limited to prove very much in the demonstration of the success of this new method, but they have given excellent results, and show the easy application by simple means of a method which certainly seems full of promise.

DISCUSSION.

Dr. W. H. Wathen, of Louisville, said he had listened with much pleasure to Dr. Marcy's paper describing his ingenious method of uniting perineal lacerations by lateral pressure, exerted by means of the pins he has devised. These pins can be easily and quickly introduced and adjusted, and if they accomplish all the distinguished author claims for them, they are superiór to the silver wire or silk suture. He could see no reason why this means of operating should not prove successful in incomplete lacerations, but where the rent extends into the rectum, he feared that the pins could not be placed well under the ends of the sphincter-ani muscles, so as to bring them in and hold them in perfect apposition. Unless this can be accomplished, the ends will fail to unite, and although there may be perfect union of the balance of the perineal body, the operation will be a failure, for the woman will have no control over the gases, and generally no complete control over the feces. As the pressure of the pins is entirely lateral, there could be no dragging upon the parts, which may prevent a recto-vaginal fistula, which is sometimes left after these operations.

He was decided in his opposition to the old treatment of constipating the bowels after perineal operations, and urged that a daily liquid stool be encouraged. This had been his treatment for years, and he had always taught the same to his pupils. He had observed that in his practice the results were better than in the practice of others who constipated the bowels. He was proud to see that the tendency of practitioners is in this direction, and was sure that in a few years the bowels will be treated in no other way. These patients should be prepared for this operation by giving a purgative every night, or every second night, for ten days; and after the operation, the diet should be of a quality that does not form much fecal matter.

Dr. W. W. Potter, of Buffalo, said: Though much that has been said here this afternoon may not have been technically within the parliamentary rule, as strictly germane to the paper before us for discussion, yet I am rather glad the debate has taken such a wide range, and that so much latitude has been permitted; for there is not in the whole range of gynecological art, a subject of more practical importance, nor do I know of any more profitable way in which we could consume the same amount of time. A sound perineum is such an indispensable condition to the good health of woman; so much of her happiness and comfort, nay, even length of years, depends upon a substantial perineal body, that I have almost come to look with contempt upon a member of our profession who speaks slightingly of even the lesser perineal rents, and who does not take the necessary steps to secure immediate union when this accident occurs, as it so frequently does in the primiparous parturient.

But my purpose in rising was only to speak of a point or two in the after management of the secondary operation. First—I am prepared to endorse all that has been said in favor of the non-constipation plan. I would seek to promote daily, certainly after the second day, soft, pulpy stools, through the administration of laxatives, such as the comp. liquorice powder of the German pharmacopiæ, elix. sennae, etc., supplemented if need be, by an enema of sweet oil.

Second—I would dispense with the catheter if possible, and would certainly avoid prolonged catheterization after perineorrhaphy. It is, however, probable that for a day or two the bladder will refuse to act independently, and of necessity the catheter must be used. But just as soon as power over the bladder is restored the catheter should be laid aside, and the woman be allowed to pass water naturally, for the contact of healthy urine with the properly coaptated parts is no longer the bug bear of former years, since experience has clearly shown that it is not a bar to immediate union. It is, of course, necessary to use a lavement of warm water after each evacuation of the bladder, and it is also a good plan to keep the parts constantly well smeared with vasaline.

Third—For some time past I have adopted the plan, after the secondary operation, of carrying high up in the vagina a strip of iodoform cotton or lint, as a protection to the line of coaptation, the lower end of which is allowed to hang outside over the wires, and to remain thirty-six to forty-eight hours, when adhesive union will most likely have taken place. This serves a good purpose in preventing the natural secretions from working in between the edges of the wound, and makes the dressings as near antiseptc as may be in this region. That iodoform plays an important part, when judiciously employed, in promoting the process of repair in vaginal surgery, as well as in many of the diseases of the sexual organs of women, is getting to be pretty well understood, and I can bear testimony to its usefulness when used as I have described after perineorrhaphy.

IS IT FAIR? A STUDY OF THE COMPARATIVE POLITICAL POSITION OF THE MEDICAL PROFESSION IN THE UNITED STATES.

BY CHARLES MCINTIRE, JR., A.M., M.D.

[Read before the American Academy of Medicine at its annual meeting October 9, 1883.]

In this paper the assumption is made from the start that medicine has an equal claim with theology and law, to be classed among the learned professions.

That this assumption may not be deemed presumption on the part of a physician, let us hear the testimony of others. In the *Boston Medical and Surgical Journal* of the present year (pp. 108–590) there is a report of the annual banquet of the Massachusetts Medical Society. On that occasion B. A. Gould, PH.D., Gött., Director of the Astronomical Observatory of the Argentine Republic, is reported to have said:

"The medical was the first of the learned professions. If there was but one learned profession it would not be that of theology, for our consciences lead us to adore and reverence; nor could it be the law; but it would be the one profession which requires experience and thought and investigation."

And the Rev. E. A. Horton, of Boston, prefaced his remarks thus:

"Friends of the one necessary profession, you do me great honor, coming as a member of a supernumerary profession."

By common consent, theology, law and medicine are included among the learned professions—in many enumerations the number is limited to these; while, until very recent times, at least, engineering, journalism, pedagogics, etc., have had to make claims to a position not always awarded them. Thus in an editorial article in the *Engineering News* for July 21, 1883, the writer says: "The profession of engineering, as the term is now used, is of modern growth;" and certainly the editor of one of the leading journals of the land, in writing to engineers, would claim for his calling all that would be granted to it. But whenever the learned professions are spoken of, theology, law and medicine (in the abstract, at least) are always included.

Accepting this, and reasoning *a priori*, there would be something of an equality in the character of the preparation for, in the method of entrance upon, and in the relative position of all professions classed as learned, in the present discussion of theology, law and medicine.

In a paper which I had the honor of presenting to the Academy a year ago, a disparity in the preliminary training was demonstrated. I know of no investigation as to the professional training; indeed, it would be almost impossible to procure reliable testimony.[1] I had hoped at this time to present a tabular statement which would have been helpful in determining whether the facts agreed with the theory in the remaining points, but at present the returns are too incomplete for a tabular statement.

But from the uniformity of the information obtained, the following propositions are submitted as descriptive of the condition of entrance into the learned professions, and of the position before the civil authorities of the various States.

I. It is the rule in the various religious denominations and contrarywise the exception, to have the candidate for the ministry examined by some church court or council, composed in whole or in part of clergymen, on their preparatory and professional training, and no collegiate degree, or certificate of a theological school, is accepted as a matter of course. And the license of this ecclesiastical body is necessary for his recognition by the laws of the land as a "minister of the gospel."

II. It is the rule, and contrarywise the exception, among the various courts to have the person applying for admission, not already admitted to practice by another court, examined by a committee of lawyers, who are not compelled to accept the degree of LL.B. in place of an examination.

III. It is the *exception* and not the rule, that prevents any one holding a diploma of any medical school whatever from practicing medicine wherever and however he pleases, and to be legally recognized as a physician, the profession of the locality or of the State to the contrary notwithstanding.[2]

If these propositions are true, and if medicine is to be classed among the learned professions, almost without volition the question arises in one's mind: Is it fair that the safeguards given to the two should alone be denied to medicine? Let a hypothetical case illustrate these propositions: Two young men graduate from one of our better colleges, e. g., Yale, with honor, and continue their studies, one at the Union Theological School, the other at the Columbia Law School, and again graduate with honor, but in neither case have they applied for registration nor been examined for admission into the professions indicated by the character of their studies. About the same time, a fellow-townsman, never noted either for brilliancy nor persistency of mental effort, leaves home for a few short months and is graduated by some medical school—any of those not recognized by the Illinois State Board of Health. These three men return home. The pulpit of one of the churches is vacant, but closed to the young theologian because he is not "licensed." The citizens of the place desire to have a nuisance abated and have signed a petition to be presented to the court; the graduate of the law school cannot present it because the rules of the court permit only members of the bar to present a paper of this kind and he has not been "admitted." There has been a sudden death, accompanied by suspicious circumstances; because a friend of the coroner, the newly-fledged M. D., makes the autopsy, and the court receives his testimony as an expert *because of his degree*. I appeal to the common sense of our American people and ask them: Is this fair?

Possibly it might be urged that the hypothetical statement is forced; that anyone so prepared could be readily licensed in their respective professions. True enough! but where is the corresponding protection given to the sister profession?

Abandoning hypotheses, there is abundance of

[1] For instance, the assertion of the State Board of Health of Illinois that many medical colleges permit students to graduate with a lower standard than their published one.

[2] Twenty-two States and Territories have such laws (regulating the practice of medicine) good, bad or indifferent. The following States may be said to have good laws, viz: North Carolina, Alabama, West Virginia, Illinois, Missouri, Minnesota, New Mexico, Wyoming Territory, Mississippi, and Louisiana. Alabama requires all persons, both those holding diplomas and those having none, to appear before the State or county boards. North Carolina requires about the same, but the penalty for violation of the law is inadequate, and there is some complaint against it for that reason. The Mississippi law is new and cannot be so well judged yet.—*From a letter from Dr. J. H. Raueh, Secretary State Board of Health of Illinois, to Dr. R. J. Dunglison.*

available testimony at hand. The *Boston Medical and Surgical Journal*, 10943, publishes a letter from Maine, from which the following is abstracted :

"A subject which attracted a good deal of attention in the profession was an attempt to procure a law for the registration of practitioners of medicine. * * * The bill provides that graduates of any institution legally qualified to confer medical degrees, and all who had practiced without a diploma for thirteen or more years continuously should be allowed to register ; that all persons practicing medicine without having been registered should be deemed guilty of a misdemeanor. * * * It will be seen at a glance that this was not a strong bill, for it admitted to registration the very worst of the quacks; but it was believed to be impossible to get a law which should require every physician to be the possessor of a diploma of a respectable medical school, and it was thought best to try to get one which would be advantageous in the future even if something was sacrificed for the present. * * * The bill was defeated by a small majority. As usual the physicians who urged the passage of the bill only got abuse for their attempts to protect the public against the homicidal incompetence of quacks."

The reply to my inquiry as to the qualifications necessary to the practice of law in Maine, by a member of the Portland bar, so aptly makes a parallel statement that I quote a part of the letter :

"By a recent statute of our State, the matter of the admission to the bar has been placed on a better footing than formerly. All examinations are in the presence of a Justice of the Supreme court, and must be satisfactory to him. They are conducted by a committee appointed by the court in each county and are partly oral, partly written. Applicants must have studied *at least* two years in some attorney's office in good standing, and present a written recommendation from him. The two years provision is a compromise ; it was all we could get from the legislature. None are admitted without examination except members of the bar of another State, who have been in active practice and good standing for at least three years."

The legislature of Maine refuses even the apparent safeguard of a degree to the medical profession. For that of the law they insist upon an examination, their point of refusal being the length of time to be spent in law studies before coming up for examination.

In my own State (Pennsylvania), after many and hard struggles, the legislature has given us a registration law, and the same calumnies have been used with us as in Maine. Under the present statute a man was tried and convicted ; upon application for a new trial (which was refused), the judge said :

"Something was said during the argument to the effect that the statute in question might be obnoxious to the objection, that it could deprive the defendant of his property without judgment of his peers, or due process of law. But what vested right or property can a man have in a profession, unless he conforms to the law of the land in his pursuit and practice of it? * * * The right to compel a lawyer to persue for a certain time a prescribed course of study, and to submit himself to the ordeal of an examination, as a condition precedent to entering upon the practice of the profession of the law, and receiving its emoluments has never been successfully questioned, and this in the absence of any positive statute on the subject."--(*Carlisle Herald*, July 19, 1883.)

Is it necessary to search for additional evidence? McClelland, in his *Civil Malpractice*, asserts, and again and again quotes from law authorities, that the possession of average knowledge and skill is all that the law requires in any case, and more than this, the average knowledge and skill of the school of medicine which the person professes to practice ; thus an Indian doctor could not be condemned if he did not exhibit the average knowledge and skill of the medicine man. A few sentences from pp. 18 and 19 will serve as a sample of the many opinion she quotes :

"A physician or surgeon is responsible only for *ordinary* or *reasonable* care and skill, and the exercise of his best judgment in matters of doubt. * * * * A physician is expected to practice according to his professed and avowed system, where there is no particular system established or favored by law, and no system prohibited. Hence, in an action for malpractice, evidence to prove that the defendant's treatment of the case was according to the *botanic* system of practice and medicine, which he professed and was known to follow, is admissible, (*from Hilliard's Law of Torts.*) * * * * 'The least amount of skill, therefore, with which a fair proportion of the practitioners of a given locality are endowed' (*Bouvier's Inst.*) is taken as the criterion by which to judge the physician's ability and skill. * * * * It must be borne in mind also that the courts will take no notice of the different 'schools' in medicine, the term 'physician' being legally assumed by any one who chooses to announce himself as a practitioner of medicine. (*Sutton vs. Facey*, 1 Mich., 243). The law recognizes all systems as legitimate ; at the same time it requires the physician to practice according to his professed and avowed system. A departure from the received canons of a given system will be taken as a want of ordinary skill. (*Bowman vs. Woods*, 1 G. Greene, Iowa, 441 ; *Patten vs. Wiggin*, 51 Maine, 594)."

And so the uneducated and the sharper, like the wolf in the fable is able to cover himself with another's skin, and enter the fold without hindrance.

So in every instance the political status of the physician is beneath that of the lawyer and minister, nor has he the same safeguards thrown around him, either by legal enactment or popular opinion, that surround its twin profession so-called. Can we help asking the question, Is it fair?

"But every lawyer is not a gentleman and a scholar, neither every minister of the gospel a profound theologian and a saint, despite the safeguards," says some captious objector. Granted, but the remedy is in the hands of those vho are most interested. In the county in which I live, the bar, a few years ago, adopted new rules for admission ; they demanded a preliminary examination, and they made the final examination more severe ; and they "pluck" applicants and send them to school or to college :

the remedy is in their own hands, if they have not prepared men it is their own fault. And all that we ask is fair play and no favors.

It might be proper to ask the cause of this sorry state of affairs. A moment's reflection shows that it is a very complex question. Mrs. Stowe's *Topsy* did nought but grow, but to express the elements involved and the forces at work in the growing has been one of the problems of the ages. So here it is a generation and a growth—probably some of you would phrase it degeneration and decay. To carefully and philosophically trace the evolution of the varied and diverse elements included to-day in the term *physician*—or more vernacularly *doctor*—would be a work of magnitude, but of interest. May I hope to have the pleasure of listening to a paper on this subject at some future meeting of the Academy?

The material is not at hand, even were the skill present and did space permit, to attempt it here, but among other forces there are two which might be noted as pertinent to our subject[1]. There are (*a*) the nature of our calling, and (*b*) the indifference of our profession.

Our calling is elementally and essentially personal, man to man, and all duties toward aggregated humanity grow out of this foundation duty. It exists because there is physical suffering, which excites the sympathy of those around, and the desire to relieve. With thé many, the best to be done is to send for some one whom they believe better able to relieve than themselves. And the exercise of faith here differs not from its use elsewhere; it is not necessarily guided by reason. For example, let a family move into a town, and desiring a physician, make inquiries concerning them. Is not Dr. X or Dr. Y suggested, because he is said to be good or successful, and this apart from any learning or training that he may have? Apply this to the sparsely inhabited period of our country, when there were few trained, and one can easily see how an entrance could be given to presumers of all sorts.

With such a calling join the indifference of the profession, an indifference which is the trunk of a many-rooted tree, the tap root possibly being the lack of a sufficiently broad preliminary training; so that when we add the lack of pruning and cultivating, the condition of to-day is the to be expected fruitage.

To extend help to a fellow-being in suffering is commendable; it is an inevitable duty of mankind, and should be urged by no one more than the physician. But to exercise the official acts which are supposed to be the outgrowth of certain professional study and experience; to order the compounding and administering of substances capable of doing injury and inflicting suffering; to certify to causes of death, and thus to contribute to the good order of the nation—in short, the devotion of one's self to the multiferous duties known to all as the duties of a physician, and the power to receive the emoluments pertaining to such services, should not be assumed. And it has been by the indifference of the profession that from the very beginning until now a stubborn defense of professional privileges has not been made.

These two causes working in and with the many other causes in the past, have produced the result as we now see it; and these two causes aid and abet the many causes at work to-day to prevent the growth of the reaction. For there is a reaction, and we should, as we honor our profession, throw off the lethargy that may be upon us, and endeavor by every means in our power to bring that calling we profess back to the level of her sister professions; so that whether from the State or the people, from an educational or a political standpoint should the view be taken, if medicine be not seen on a line with her sisters, it will only be because she leads them.

[1] While this paper was preparing, the address of Dr. N. S. Davis before the American Association of Medical Editors appeared in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. It contains a most excellent historical statement of the legal status of the medical profession, but between the lines all along could be seen the above mentioned causes in operation.

MORAL INSANITY.

BY WALTER HAY M.D., LL.D.

[Read to the Tri-State Medical Society, Chicago.]

In proposing a subject for your consideration and discussion, it would seem proper to present at the same time its definition—to fix limits for the scope of the thoughts which shall be occupied with it; to assign bounds for the mental operations which may comprehend it.

It would be scarcely an exaggeration to say that the most of the conflicts, arising in the course of philosophical discussion, have their origin in ambiguities of language and variations in verbal definition, rather than in essential differences of thought or opinion. Let a proposition be stated in terms so clear, to the mind of the originator, that no room seems to remain for a different interpretation, and yet differences will arise therefrom so wide and so varied as to astonish and confound the author, with the perplexity which he has occasioned.

But a duty so obvious, under ordinary circumstances, becomes impossible of accomplishment when we come to the consideration of the subject, Insanity. Out of the desire and effort to define this condition have sprung many of the errors which now complicate its study, and much of the false reasoning which perplexes investigators and deludes the world.

A verbal definition of insanity is impossible, since it is a negation, and hence cannot be defined in the terms of a positive proposition. Every attempted definition is either so comprehensive in its generalization as to include many conditions not properly belonging to the category, or so extensive in its specialization as to exclude many which come legitimately within its scope.

In attempting to define insanity, one seeksvainly for positive characteristics which may be fixed and assumed as standards of comparison; and will continue to seek vainly for definite ideas, and will find the problem of mental disease insoluble until its purely negative character is accepted and comprehended. Considering the subject abstractly, then, it is necessary first of all to submit the mind to the restriction of regarding insanity as the negation of sanity.

Sanity, of course, is a positive state, theoretically,

and may be defined as a condition characterized by equilibrium of mental energy expressing integrity of nervous structure, or, conversely, integrity of nervous structure, expressed in equilibrium of mental energy. By energy, I mean, of course, force in action, "ἐν ἔργον," since we have no knowledge of mental force except in action.

Every mental state, then, which cannot be so characterized, is a state of insanity.

An analysis of the various forms of mental disease, in order to arrive at accurate results and a true solution of their mystery, must proceed upon the principle of determining the absence or inefficiency of normal faculties by whose action when present mental equilibrium was conserved, rather than the presence and sufficiency of morbid forces by whose interference it might be disturbed.

Now, since law is the expression of universal obligation, the essential characteristic of a law must be its applicability to all cases within its proper sphere.

Now, the principle just indicated will be found to fulfill this condition, to have this characteristic, and to be capable of accomplishing the analysis of every problem of mental disease presented for solution; or, in other words, every phase of mental aberration will be found to be a condition of disorder induced by the absence, or inefficiency, for the time being, of certain faculties or capacities by whose energy when present normal conditions were conserved.

This principle, although explicitly disregarded and ignored by the majority, has long been implicitly recognized and admitted in the technology of mental disease; as is illustrated, for example, in the designation, idiot, *idios privatus*, applied to that class of human beings whose mental faculties have never been manifested by reason of arrest in the development of the organs through which their expression should be accomplished. For while the appellation may be construed as originally to indicate one deprived of civil-rights, this deprivation was only through and by reason of mental imbecility to exercise them.

Now, the idiot is such not by reason of any deficiency primarily in his reasoning faculties or faculties of comparison. For since these have never been exercised, a judgment concerning them is impossible, but in consequence of deficiency in his perceptive capacities, whereby he fails to receive impressions upon his brain which should constitute the material out of which judgments could be formed and about which reason might be exercised.

In many examples of this class of unfortunates, deficiency of perception is quite apparent by reason of conspicuous defect in the organs of special sensation, and the subject is often perceived feebly endeavoring to supplement the deficiencies of one sense by the application of another, as for example to comprehend through the sense of touch, or taste, or smell, conditions ordinarily appreciable by that of sight, and reciprocally. The true nature of this condition has been implicitly recognized in the system of education of idiots, now well established and in successful operation in this country and in Europe.

This system consists in the education of the perceptive faculties, and has for its basis progressive series of object-lessons. And there exists no grander monument to human intelligence and philantrophy than this, founded by the genius of the Abbé Sicard, developed by Itard, brought to America by Seguin, and conducted successfully by the labors of the Wilburs and others.

What has been said of the defective perception of idiots applies with equal force to the class somewhat higher in the scale of intelligence termed imbecile, or, more commonly weak-minded, although the evidence is not so obvious to the ordinary observer.

Close scrntiny of the mental operations of the weak-minded will reveal the fact that their imperfect reasoning results from original defective perception. Many, indeed most, of this class are incapable of abstract thought; their perceptions are superficial, incomplete, imperfect, comprehending but few of the attributes of objects, and their judgments, if they can be said to form any, necessarily unequal and narrow; their opinions crude, their reasoning vague and inconclusive. One who should carefully analyze the attempts at reasoning by some of this class, will perceive that the failure to arrive at correct conclusions results from incompleteness of original observation; the individual sees, as we say metaphorically, but one side of anything, and his mind responds at once to this simple impression. The mental processes of this class are analogous to the actions of the spinal cord, uncontrolled by the influence of the brain, which responds, by its reflex irritability, to sensory impressions in spasmodic, incoördinate muscular movements, without definite aim or purpose.

As the definition of insanity in general is impossible, that of its different forms is equally so. The lines of demarkation by which they are separated from each other, the basis of classification by which they are identified, are arbitary and conventional. As it is impossible to say where sanity ends and insanity begins, so also is it impossible to fix a dividing line between idiocy and imbecility, the higher forms of the one being blended into the lower forms of the other by insensible gradations.

Under conventional systems of classification the first class is limited to those in whom the evolution of the mental faculties is arrested at some pre-natal, congenital, or infantile stage, the second to those in whom it has advanced to some one of the various phases pertaining to childhood or youth.

Passing by these forms of mental defect, in which deficiency of the perceptive faculty, as the essential substratum, is more or less obvious and even conspicuous, and proceeding to analyze the typical forms of insanity in its ordinary and restricted sense, the same characteristics will appear.

In mania, monomania, and melancholia, the three types under which the various forms of insanity are conventionally grouped, delusion is recognized as the characteristic factor.

Now, a delusion is not, as it has been defined by some and accepted by the majority, a false belief, but a false ideational concept.

Belief is the assent of the mind to a proposition unsupported by evidence, being in its radical signifi-

cation opposed to evidence, which is the basis of knowledge.

Delusion, however, is based upon knowledge, and is the conclusion of the mind from comparison of false evidence. If false belief constituted delusion as defind by some, and delusion be the characteristic of insanity as admitted by all, then every one would, indeed must, be regarded as insane by those differing from him in matters of faith, which is absurd.

Now, the only channels through which evidence can reach the mind primarily, are the perceptive faculties; if these faculties be in a healthy condition, impressions received through them would be correct, and their comparison would result in correct conclusions, and there would be no delusion.

Delusions, whenever it is possible to trace them to their source, will be found to rest upon hallucinations, false sense, perceptions without objective bases, residua of former impressions recalled into the sphere of consciousness by the operation of some disturbing force.

But simple delusion cannot be regarded as the absolute criterion of insanity, because even false conclusions from evidence may be reached by perfectly sound minds, from hasty and careless comparison. The true criterion of insanity is the retention by the mind of a false conclusion insusceptible of removal by sufficient evidence, constituting an insane delusion. Rigid exhaustive analysis of every case of insanity, will detect this element as the prime factor.

As in many physical analyses constituent elements are detected insusceptible of separation from their combinations, and yet clearly recognizable through their reactions, so in the analyses of some of these psychical conditions essential factors exist too vague and indistinct for independent identification, and yet recognizable through their mental correlations. This proposition is also implicitly admitted in the existence of concealed delusions, which, having eluded observation and escaped detection, sometimes during the entire duration of a period of mental diease, have subsequently been confessed by their victims, and indicated as the hidden source and origin of the insanity.

Opinions may differ regarding the source and origin or the nature of the force which we identify as mental force, or mind, since their scope is immaterial and outside of the realm of positive knowledge and within the limits of faith or belief. Such difference of opinion will and must always be. That opinions should differ however concerning the forms in which this force manifests itself, and concerning the correlations of those forms, is remarkable, since these, being within the limits of positive knowledge, are susceptible of identification and definition, and are legitimate bases for induction. Whether mental force be examined in relation to its normal operations, analytically or synthetically, whether its investigation proceed by induction from observed phenomena, or deductively from *a priori* assumption, its earliest form of energy will be found to be self-consciousness—the recognition of self and its definition from that which is not self—the *ego* and *non-ego* of the metaphysicians. For it is manifestly impossible for self to recognize that which is not itself without having first identified itself; in fact the recognition of that which is not self implicitly presumes the recognition of self.

Next in order to the recognition and identification of that which is not self—the *non ego*—comes the determination of the relations existing between these two perceptions, the reciprocal relation of the self and the non-self. The next form of mental energy is that which is exercised in the determination of the correlations of all that is outside of self in which are comprehended the highest forms of thought.

Now, whether the mind exercises its force upon that which is outside of self, or upon its own operations, this primary form of energy, self-consciousness, must underlie all of its processes as their primary and essential element.

The well organized mind will, however, so adjust its activities as to perceive the due and proper equilibrium between these various constituent forms of energy, giving to each its proper correlative influence in the accomplishment of any mental process, subordinating the self to the non-self, or reciprocally, as may be required. Indeed, the ability to so adjust these energies, and the facility of perfecting such adjustment, are the true tests of mental soundness, the two criteria of mental excellence.

Let this test be applied to any form of mental disease, any type of insanity, and this facility will be found to have disappeared, this ability diminished, and always in the same direction—always in the direction of the exclusion of the *non-ego* restriction to the *ego*.

The first phases of mental energy to be obliterated are the altroistic, the last the egotistic. Whatever form of insanity be considered, this egotistic element will be found to constitute its predominant factor. The varied delusions of mania always present to the mind of its victim, first of all, the conviction of his overwhelming self-importance; he is the favored child of fortune, has vast wealth, gigantic strength, is some great potentate, prince or emperor, the special minister of the Deity or the Creator of the universe himself. If melancholia claim him as its victim, his delusions of sadness and woe have always self as the principal figure in their pictures of despair; he has concentrated upon himself the entire wrath of offended Omnipotence; the eye of the Almighty is closed to all other objects but him; let whatever be the *form* of delusion egotism, exaggerated self consciousness, is its *essence*. It is common to speak of monomania as of minor consequence, since but one delusion occupies the domain of thought. Let a handful of black wool be carded into a mass of wool of snowy whiteness, let the whole be spun and woven together, and who can define the limits to which the little handful has extended? who can isolate the unmixed threads? who can indicate the portion of the fabric unshaded by the color? This metaphor is gross and material, but illustrates, not inaptly, the condition of the web of human thought into which one single delusion has been mingled, pervading inextricably and tinting indissolubly the whole tissue. A drop of ink is a small addition to

a vase of pure water, but sufficient to render impure every particle of the fluid. But to these other, and incidental forms of mental energy are superadded, which have been erroneously regarded as primary and original, and these are termed feelings.

In the physiological order sensation is the reflex of an impression upon the receptive capacities, without which impression it could have no existence, so also in the psychological order is feeling or sentiment the reflex of an impression from without upon the receptive faculties. For whether the feeling or sentiment is generated by an impression made *de novo* immediately upon the receptive capacities or recalled mediately into consciousness through the operation of the reproductive faculty, it must have its source and origin, its object, outside of the self.

Hence, there can be no feeling or sentiment without an original object from which the impression was received, of which impression the feeling was the reflex and incidental effect.

How can one feel without knowing that he feels? For a feeling which is outside of the cognition of a sentient being has no existence, is a non-entity.

Now, the act of knowing necessarily presumes the capacity to know, and the subject knowing, and also the exercise of that capacity by the subject.

Hence, the assumption that "all mental action originates in feeling" is erroneous.

All feelings, whether in the physiological or psychological order, are susceptible of classification into two categories, *i. e.*, pleasure and pain.

Now, the reaction of these feelings or sentiments upon the mind induces another series of energies, wishes or desires, all having their origin and being associated with one or the other of the categories of feelings already indicated, and marking or expressing the inclination or aversion of the mind to or from any object whatever.

Now, the sum total of the inclinations and aversions in any mind constitutes its moral tone or character, which is good or bad according to the preponderance of its inclination towards that which is good or evil.

But every mental action has for its ultimate aim the allowance of some good to its subject.

Nothing is absolutely evil. For whatever may be the object of one's desire, it becomes so by reason of some good therein to the one desiring it.

Crime, however dark and revolting, is only contemplated and perpetrated by reason of some good which the criminal proposes to himself thereby, and which to his limited perception masks the evil. Considering it from his own selfish or egotistic standpoint, he perceives only the good to himself but refuses to contemplate the evil to others; the good so perceived impresses his mind, inducing therein the feeling of pleasure, out of which grows the desire to attain the supposed good, and the effort to accomplish it is suggested.

These desires constitute also the impulses or motives to action.

All action, therefore, of whatever kind, has for its ultimate origin the objective perceptions of the individual reflected in his feelings or sentiments of pleasure or pain, out of which grow his desires or inclinations, which become the impulses or motives to action.

Without adequate perception or knowledge of an object, there could be no feeling in reference to it; without feeling of pleasure or pain there could be no desire; without desire no motive, and without motive no action.

In the normal state there can be no variation in this sequence of mental energies, except by means of the interposition of the directing, controlling, governing agency of the will.

It has been already said that nothing is absolutely evil, and, that whatever be the object of one's desires, it becomes such by reason of some good to the one desiring it. For in a normal condition no one seeks that which is evil to himself, since that which is evil occasions the feeling of pain, and this induces aversion.

Hence, one who seeks evil does so either by reason of defect in his perceptive faculties, whereby he apprehends objects incorrectly, or by an effort of will diverting his actions toward an object or aim, from which in the natural order they would have beeu averted.

It follows therefore necessarily, if the foregoing propositions be correct, that the assumption, that out of perfectly normal perceptions, feelings or sentiments discordant therewith could arise, giving origin to abnormal desires impelling to vicious actions, is erroneous, and any theory or doctrine based upon such assumption is untenable.

This philosophical error, that "all mental action originates in feeling," in the source and origin of the modern theory of "moral insanity." For although not explicitly formulated by the originator and earlier exponents of the doctrine, this false principle is explicitly involved in every expression of it. The theory is termed modern since it had its origin in the conclusions of the illustrious philanthrophist, Phillipo Pinel, drawn from his clinical observations at le Bicétre and la Salpetrière in Paris, during the close of the last and the beginning of the present century, under the appellations *Manie sans dèlire* and *folie raisonante Pinel*—as quoted by Esquirol—designated certain forms of mental disease marked by perversion of the habits, dispositions and affections without lesion of the understanding. Esquirol, the pupil of Pinel and physician of la Salpetrière and Charenton, while explicitly accepting the conclusions of Pinel, implicitly refutes them.

One need not go far to find the source of Pinel's ideas in the philosophical assumptions of Condillac, as developed in his *Essai sur l'origine, des connaissance*, in which he asserts that all mental energies are but modifications of sensation, which is primary.

It would be no difficult task to re-arrange the cases, cited by these two great masters in medicine to illustrate the doctrine of "reasoning madness," into two new categories, *i. e.*, of delusional insanity and wilful vice.

In many of these reported cases the evidence pointing to the exisience of delusions in the minds of the subjects is so clear and conclusive that its

escape from detection is remarkable, but explicable, perhaps, by the fact that great philanthropists are not always great philosophers, and in their zeal for the welfare of a class they sometimes overlook the higher obligation, "to promote the greatest good to the greatest number." To the condition designated by Pinel as "reasoning madness," and by Esquirol as "reasoning monomania," Dr. Prichard, in England, a few years later—about 1822—applied the epithet "moral insanity."

This doctrine, thus originated and promulgated, became, about twenty years later, on this side of the Atlantic, a refuge and defense for crime.

Its first application to this purpose was in the defense against an indictment for forgery in the city of New York, about forty years ago. Since that date the practice of resorting to this theory, or some modification of it, as a defense in criminal cases has become so common that public indignation has been aroused at the flagrant violations of justice perpetrated thereby. The attention of thoughtful minds has been directed to more careful examination of the data upon which this theory is based, and these will be found to furnish no substantial foundation for it.

It has been customary with clinical observers to contemn the application of what they are pleased to term, metaphysical abstractions, to the elucidation of the complex problems of mental disease.

But clinical observation alone, without previous training of the mind in correct philosophical methods, will leave the observer very far short of attaining any adequate comprehension of the true relation of phenomena. For these metaphysical abstractions are in reality the principles which underlie the utilization of all scientific observation, the methods through which matter is comprehended.

And as method without matter is void, so matter without method is incomprehensible.

MEDICAL PROGRESS.

MEDICAL WOMEN FOR INDIA.—We read of the movement started in England for this purpose, and we find eloquent references to the benighted condition of the people of India, and the necessity for woman's work in that direction, as a part of the text of addresses before training-schools for nurses, and in the commencement exercises in women's colleges, until we receive it as an accepted fact that we must interest ourselves in the sending out of what are to be missionaries of medicine to enlighten a heathen country. But when we read such comments as appear in print in that country itself, such as the able editorial on this subject in the August number of the *Indian Medical Gazette*, we are suddenly but satisfactorily awakened to the fact that perhaps we are as green in our knowledge of that country as a Hatch or Villard Englishman is of this. To quote the editor, who after estimating that to allow a lady doctor to every 100,000 of the female population the number required would be 1,000 at the very least, with hospital experience and a knowledge of the language, manners and customs of the country, and a salary of £350 a year to start with, provided for and guaranteed, with the prospect of making £2,000 and £3,000 a year after the lapse of two or three years; (and where are they and the money to come from?), he says: "It is refreshing to turn from these Utopian speculations to what is actually being done. A philanthropic citizen of Bombay—Mr. Kittredge—has collected a sum of £26,975, and got the promise of £13,554 more, for the purpose of paying the salary of one or two lady doctors who are intended to have a hospital and dispensary established for the purpose of founding a hospital in connection with this movement, and a large and influential committee representing every section of the community has been organized for the purpose of promoting the objects in view." "The training of midwives of European, Eurasian and native extraction, in Indian hospitals has for many years been systematically carried out in Calcutta, Madras, and elsewhere. We know from personal experience that these women render excellent service to the community."

While a majority of the Calcutta Medical College consider the requirements of the country point rather to the provision of educated midwives and nurses than of full-blown lady doctors, the Government of Bengal has assumed the responsibility and thrown open the medical college and hospital to females, and one young lady, a B.A. of the Calcutta University, is now enrolled as a regular student. In Madras lady students were admitted in 1875 into the Medical College under special rules. One of the ladies so admitted has proceeded to England and obtained the M.B. of the University of London with great distinction. Others are reported to be usefully engaged in private practice. Think of that, ye women of America who, as the advance guard, are knocking at the doors of our universities. "Women in India have obtained liberty and encouragement to qualify themselves uner the same circumstances and advantages as men for the practice of the profession of medicine, and the State is prepared to sanction their doing so."

A CASE OF EXTIRPATION OF THE LARYNX.—Surg.-Major K. McLeod, Professor Surgery Calcutta Medical College (*Lancet*, Sept. 15), reports a case in a Hindoo clerk, 35 years of age, where a tuberculated (epithelious) growth, the size of a child's fist, occupied the front and right side of the larynx, none of the lymphatic glands of the neck being enlarged or indurated, and the tumor being clearly defined as limited to the larnyx and probably right lobe of the thyroid gland, it was determined to remove it. An incision was made through the skin and fascia all around the growth, the sterno-hyoid and omo-hyoid muscles of the left side drawn outwards by a blunt hook, the sterno-thyroid divided at its thyroid attachment. The corresponding muscles of the right side being implicated in the mass were divided below it; the right lobe of the thyroid body being implicated, its attachments were divided into four sections and strong cat-gut ligatures passed around them, and the tissues divided; the superior thyroid artery bled freely in consequence of the slipping of the ligature, but was quickly secured, being the only bleeding of

any consequence during the operation. The windpipe was carefully dissected off the œsophagus, fixed by a sharp hook, and divided just below the cricoid cartilage. The larynx was carefully separated from the pharynx, the thyro-hyoid membrane and muscle cut through, the epiglottis severed at its base, the laryngeal attachments of the constrictors cut, and the mucous membrane of the pharynx divided beyond the limits of the tumor. A few bleeding points required deligation, and the orifice of the trachea was secured to the edges of the skin at the lower angle of the wound by four points of silk sutures. The operation occupied from beginning to end exactly one hour and ten minutes. The patient suffered slightly from shock, was fed entirely per rectum for twenty-four hours, which had to be discontinued on the fourth day owing to severe irritation of the lower bowel. From the second day onwards food was administered by means of a funnel, India-rubber tube and soft catheter, through the pharyngeal orifice. The process of granulation, contraction and cicatrization in the wound, raised the orifice of the trachea to near the middle of the neck. In little over a month the wound had healed. The patient could speak in a whisper when the hole in the front of his neck was closed by a bit of waterproof, or by the hollow of his own palm. He was soon enabled to swallow by winding a narrow caoutchouc bandage round his neck, so as to close and overlap the wound. Mr. W. T. Woods, surgeon-dentist, after taking an exact cast of the neck, contrived a vulcanite plug, hollowed out posteriorly, and secured in position by an elastic bandage, which enabled him to swallow soft food. Liquids were more conveniently administered by tube. To restore vocal articulation a suitable harmonium reed was let into the roof of a tracheotomy tube, secured by a vulcanite shield which closed up the aperture in the neck; this required great effort to produce sound, and the reed very soon got clogged with mucus. A tracheotomy tube was next converted into a whistle, but was found to be too small to produce resonance. A conical tube was next let into the roof of the tracheotomy tube, and a plug containing a tongue-shaped reed in a boat-shaped case dropped into it. This was found to answer the purposes of great ease of insertion and removal, production of sound with very slight effort; the viscid mucus escaped through the tracheotomy tube, and different notes could be produced by inserting plugs of different sizes, containing reeds of different length and breadth. The patient died five months and a half after the date of the operation, from disease, as indicated by the symptoms and revealed by the autopsy, with an infiltration of miliary tubercles in both lungs, small vomicæ in the right lung and a pint of fluid in the left pleura.

Successful Cæsarean Operation.—On June 16, according to *Le Sperimentale* Dr. Del Chiappa performed the Cæsarean operation on G. B., a primapara, aged 33, suffering from rickets. When summoned to the patient in labor, Dr. Del Chiappa, finding delivery impossible, in consequence of great narrowing of the antero-posterior pelvic axis, resolved on performing Cæsarean section. Through an incision in the linea alba a living female child was extracted from the uterus which was left to itself and not nurtured. The wound in the abdominal wall was closed by superficial and deep sutures and dressed with adhesive plasters and charpie. The temperature varied little from the normal standard throughout, only reaching 102° one day. On the fifteenth day (July 1) the wound was completely healed and the patient got up. The child continued to thrive. —*Lancet.*

Liquid Oxygen and Nitrogen.—According to the latest researches oxygen when cooled to 136° C. (213° F.) liquifies to a colorless transparent liquid at the very moderate pressure of 23 atmospheres or thereabouts. Nitrogen at the same temperature, when the pressure is cautiously allowed to fall to a point not lower than 50 atmospheres yields a colorless liquid with distinct meniscus. Ozone under quite moderate limits of pressure and temperature, is a liquid of intensely blue color which gives a vapor which can only be compared in color with the brightest blue sky. Pure alcohol is a white solid at about 130° C. (202° F.) At a very slightly higher temperature it is luicous like oil.—*Lancet.*

The Chinese Method of Determining Paternity.—A correspondent (J. H. Lowry) of the *Lancet* gives the following bit of medico-legal evidence. A basin or cup of clean water is obtained; the supposed father's finger is cut and then put into the water till some blood trickles; then the child's finger is cut and placed in the water, and if the two bloods immediately unite the proof is complete. The magistrate is sometimes bribed and the water tampered with.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from October 5, 1883, to October 12, 1883.

Hammond, John F., Colonel and Surgeon: leave of absence on surgeon's certificate of disability granted April 2, 1883, extended six months on surgeon's certificate of disability. (Par. 7, S. O. 231, A. G. O., October 8, 1883.)

Swift, Ebenezer, Lieutenant Colonel and Assistant Medical Purveyor: under the provisions of section 1 of the act of Congress approved June 30, 1883, is, by operation of law, this day retired from active service, and will proceed to his home. (Par. 4, S. O. 231, A. G. O., October 8, 1883.)

List of Changes in the Medical Corps of the Navy During the Week Ending October 13th. 1883:

Surgeon Thomas Hiland granted leave of absence for one year, with permission to leave the United States.

Surgeon Wm. J. Simon and Past Assistant Surgeon M. H. Crawford ordered to report on November 1st for duty on board the U. S. S. Trenton.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, OCTOBER 27, 1883.

AMERICAN ACADEMY OF MEDICINE.—In the preceding number of the JOURNAL we gave a pretty full report of the proceedings of this organization at its recent annual meeting in New York, and we shall have the pleasure of giving our readers the address of the president and most of the important papers presented during the sessions of the Academy in succeeding numbers. The leading object sought to be accomplished by the oraganization of the Academy, namely, the promotion of a higher grade of scientific and classical education on the part of young men before they commence the study of medicine, is one of very great importance.

Apparently one of the principal methods for promoting this object in the minds of those who originated the present organization, was the building up of a national medical organization of such high character that membership in it would be much sought after, and yet could be obtained only by those who had received a regular academic degree based on a full course of collegiate study prior to commencing the study of medicine. Consequently they made the possession of such a degree a condition of membership. For this they have been severely criticised in some quarters. And while we recognize, as fully as any member of the Academy, the benefits to be derived from the regular course of training furnished by our literary colleges, and would under no circumstances underestimate its value, yet the fact is everywhere apparent that simple preliminary scholastic training does not make necessarily the most successful physician, the best observer, the original thinker, investigator or scientist. And we doubt whether on this restricted basis alone the organization can ever attain such pre-eminence in this country, as to make its influence strongly and widely felt in the direction desired. We recognize the commendable spirit which caused the founders of the Academy at considerable personal cost to organize it for an earnest and permanent influence in elevating the standard of education and training in the profession; and they have included in its membership some of the best men in the profession. We think, however, they would both disarm their critics and make much more rapid progress in accomplishing their great leading object, if they would no longer make the simple holding of an academic degree the special qualification for membership. But rather let this be joined to the evidence that the applicant has already made some contribution to the science of medicine worthy of recognition.

Let the doors of the Academy, as in some of our higher scientific associations, also be open for the admission of any individual who shall show the possession of *attainments*, no matter where acquired, that have served in the higher plane of usefulness and brought forth a fruitage worthy of the commendation of the scholar, and of the emulation of the student. Of such men the profession in this country has scores, holding the highest positions as teachers, writers, and original investigators, who received little or nothing of their instruction from institutions of learning having the right to grant degrees. America has ever been proud of her self-made men; and while we freely concede that there is no longer the same necessity for the home or self-manufacture which existed at an earlier period in our national development, we would also emphasize the fact that it is the *man*, rather than the manner of making, which the world has and ever will recognize. Let the Academy also recognize this, as well as the possession of a University degree, and it will speedily command a wider influence and a higher degree of success in the accomplishment of its leading object. Let it not be inferred from these remarks that we regard the career of the Academy thus far as a failure; on the contrary, we are glad to notice its steady progress.

Under the efficient leadership of its officers, this year the New York meeting has been a decided gain over those of the previous years. The number in attendance was much increased; a large number were elected to membership, and many of the papers read possessed a high order of merit. In its national spirit and high aims we rejoice and suggest a broader platform for the sole purpose of securing for it a more speedy and complete success.

THE ARMY MEDICAL MUSEUM AND LIBRARY.—We wish to call the attention of all our readers to the letter signed by Drs. S. D. Gross, Austin Flint and O. W. Holmes, on page 3, and to the resolutions on page 4, of the first number of this JOURNAL. These documents relate to the importance of having proper provision made for the permanent preservation and support of the Army Medical Museum and Library at Washington, by Congress. To secure this end, it is important that members of Congress should be correctly informed concerning the value of these collections, their national interest, and the great importance primarily to the education of the whole profession, and secondarily to the interests of all classes of the people. And now, during the short space of time intervening before the assembling of the next Congress, is *the time* for members of the Association, and of the profession generally, to see, or communicate directly with the members of Congress in their respective districts, and so direct their attention to these important interests as to secure prompt and enlightened action whenever these topics shall come before them in their official or legislative capacity.

Let every reader turn back to the letter and resolutions referred to in the first number of THE JOURNAL, and then do his individual duty in the matter, and not postpone it under the delusive idea that somebody else will do it better.

DOMESTIC CORRESPONDENCE.

LETTER FROM BOSTON.

The principal event of medical interest in this city at the present time is the official dedication of the stately building recently erected for the medical department of Harvard University. In a former letter the serious damage to this structure by fire was mentioned, which delayed its opening for four months, but this has now been repaired and great preparations are made for its formal delivery to the faculty. The event promises to be attended with unusual interest from the fact that at the same time a life-size portrait of Prof. Oliver Wendell Holmes is to be unveiled, which is to grace its principal hall, and a bust of Prof. Henry J. Bigelow is to be presented to the college. The most brilliant feature of the literary exercises is expected in the oration which will be delivered by Prof. Holmes, and is supposed to be his last official act in connection with the medical department of the University. His duties as Professor of Anatomy closed last March in a most touching address to a crowded hall containing many of his students of former years, as well as the regular class of the college. The occasion was one long to be remembered, and it is eminently fitting as well as a graceful compliment to his long years of devotion to the school that from his lips should issue the words of consecration and of welcome to the new edifice for the continuance of his life work.

The present year is prolific in the erection of structures for the teaching and the practice of the healing art in Boston. Among these may be notably mentioned the reconstructed and enlarged out-patient department in connection with the Massachusetts General Hospital, which is in part a memorial to the late Dr. Gay, for many years one of the surgeons to this hospital. The former building, though by no means old, had already proved far inadequate to the needs of the out-patient service, and for some years has been the occasion of serious complaints. It is thought that with a careful discrimination of patients, which I believe this hospital was the first to undertake, the present accommodations may long serve the purposes of the department with convenience to both patients and physicians. In alluding to the efforts of the managers of the Massachusetts General Hospital to suppress the abuse of its bounty by those unworthy of charity, I venture to express the opinion that in no city of the United States has this evil attained to so enormous development as in our city. This is not to be considered in any manner a reflection upon the benevolence which has for almost a century provided the means for the medical treatment of the destitute and worthy sick, nor as the indication of a desire to diminish or to depreciate the value of such benevolence, but it refers principally to a spasmodic outbreak of so-called charity which occurred some ten years ago and which has not yet entirely subsided.

During several years at about this period it was very fashionable for young physicians, either on graduating from the college or on returning from Europe, to open a "dispensary," with a glaring sign upon the outside of the building, on which the word "free" was inscribed in letters which might sometimes be seen for blocks. The means employed in the establishment of these places were sometimes amusing, sometimes ludicrous. Some of the originators worked the "church dodge," some begged the privilege of seeing such patients in one room of some convenient building, sometimes two or more aspirants for fame would unite forces and together utilize the same apartment; in fact any and all expedients were employed to attract the public, well or sick, to the particular resort of this or that so-called specialist. Some few even went so far as to hire a house, attach a plate to the door bearing the name of some saint, and thus endeavor to dispose of their services without recompense to a public who did not require them. Thus matters stood for some years, until the public gradually learned that it was folly to pay for medical services which could be obtained for nothing, and before long a state of things ensued which was truly deplorable. It was found that the hospitals, the public charities and the various legitimate private sources of relief were taxed more heavily than ever before; that the means which had usually been ample were showing greater and greater deficits, and that the proportion of charity patients to the population was constantly increasing. The evil at length

became so monstrous that the hospitals and the various legitimate charities organized measures for the protection of themselves and of each other and thus to some extent curtailed the widespread abuse. It was not possible, however, to prevent fraud, from the fact that these young dispensary founders still received gladly all who came. At length the disease became to some extent its own remedy, from the fact that quacks from all directions came pouring into the city, and in fact all over the State to a greater or less degree, and they also established "dispensaries" which were free on certain days or hours, to attract the attention of the public, and to win more and more of the remunerative practice from honest physicians. The reaction is apparently now thoroughly established and we hear less frequently of new projects for forcing gratuitous medical treatment upon a community which is roundly able to pay a fair fee for professional advice. To show the extent to which this systematic plan of robbery was at one time carried out, it is only necessary to say that one of the wealthy and selfish professors of Harvard made the statement that his clinics were not yet overcrowded and that many more patients than he then had would be received, if they were inclined to come. It seemed wrong for the school to thus act the part of accessory to an injury which affected its own graduates, and the faculty at length saw the impropriety of such a step, and have endeavored to suppress the abuse of the clinical privileges of the college. In this connection an extract from the London *Lancet*, of June 2, 1883, is very good reading, as it shows that the evils above mentioned exist in Great Britain as well as in America, and also voices an authority upon matters of medical economy and social jurisprudence. It reads thus: "It is difficult to speak in language too severe of the recent spread of special hospitals and their rapid multiplication. The origin of many of them is due to most questionable and unprofessional proceedings. Thus they are, as is well known, often only the professional advertisements of their promoters, who by such means keep their names prominently and constantly before the public. They unblushingly apply for support in aid of hospitals, the want of which never has and never will be felt, and by inuendo cast a most unjust slur on physicians and surgeons of our large hospitals, who both can and do treat the same diseases with as much care as, and with more freedom from bias, than the specialist. The appointments to these hospitals are on a par with the rest of their proceedings. The committee are frequently the creatures of the advertising promoter and appoint as his colleagues such men as he tells them."

There is evidently an increasing interest among physicians in the American Medical Association since the establishment of a journal in the place of its former cumbersome and belated volume of transactions. Many of our men will feel that they are more closely drawn to the national Association by the appearance of its weekly issue, and what is of greater importance the fact that any good work is sure of a welcome to its pages will have the effect to stimulate many a worthy practitioner to bring forward the treasure of his experience and observation for the common good of the whole profession. The very small number of medical journals now published makes it impossible for a large proportion of our profession to gain space for what might be of importance, and not infrequently the petty dictatorial spirit which infests some editorial minds discourages the efforts of truly valuable contributors and prevents that healthy interchange of views and opinions by which, after all, the practice of a section of country or of an entire country must be established and maintained, if it is to be in any sense progressive. It seems to be a mistake to use so much space in the reproduction of lectures and orations, which either are all to be published elsewhere, and thus crowd out the labors of active working members of the profession.

The various medical societies of Boston (and there are many—too many) have again resumed their meetings, opening with that of the section for clinical medicine, pathology and hygiene, at a recent meeting of which interesting papers were presented upon "The Neglect of Ear Symptoms in the Diagnosis of Diseases of the Nervous System," and "Kairin as an Antipyretic," both of which were very interesting, and a report of which I trust shortly to forward to you. The several societies in our city and their work will form the topic of a future letter.

The medical profession has recently suffered a heavy loss in the death of Dr. James A. Fleming, one of the most brilliant and talented of the younger men in this city. His genial qualities and acknowledged ability had already won for him many firm friends without as well as within his calling as a physician, and he was honored with many posts of responsibility by those about him. His early death occurred from a low indolent type of typhoid fever contracted about six weeks ago at the annual parade of the regiment to which he was surgeon. Although he was firmly convinced of the fatal character of his illness, none of his professional attendants or friends apprehended the grave nature of the disease, and his death was entirely unexpected. He was a living example of a self-made man, who had struggled with poverty and disappointment, and had at length reached the object of his ambition, and was rapidly advancing to a high position in his chosen profession.

With the exception of the usual autumnal increase of typhoid fever, the health of this city generally is very good. Nothing like an epidemic of any zymotic disease has visited us this year. The cholera has not gained an entrance to our port, thanks to the energetic measures adopted by the Board of Health, and we have been spared the feeling of anxiety which accompanies the approach of any pestilential disease. With the completion of the new system of sewerage which collects the entire sewage of the city and discharges it into salt water at a distance of four miles from the city, it is hoped that the sanitary condition will be still further improved, and that the malignancy of diphtheria, scarlet fever and allied diseases may be thereby modified. At present, with us as with others, so far as I know, these two disorders are the subject of the gravest apprehension among phy-

sicians, and the medical art often seems quite powerless to stay or mitigate their virulence. If the practice of cremation could be introduced as the rite of sepulture in cases of death from infectious diseases which are no doubt frequently propagated from the bodies of the dead, a great protection would be rendered to the living in preventing the contamination of both air and water by the poisonous elements of disease, and no indignity or desecration would be committed upon the remains of the dead. The consideration of the above subject is respectfully recommended to that coterie of enthusiasts who are now endeavoring to oppose physiological research on the sensational ground of implied cruelty to some of the lower animals, but who are apparently utterly indifferent to the welfare of the members of their own race. It may not be generally known that a cremation society was formed some twelve years ago in Boston, the members of which were pledged to do all in their power to diffuse knowledge of the advantages of cremation over inhumation, with the object of introducing the system here. The gentlemen composing the society also generously promised to cremate each other as the necessity for so doing might arise in their number, and thus give a practical illustration of the process—a proof of their sincerity. No opportunity for this has thus far occurred, and no steps have been taken toward popularizing this disposition of human remains by the society, and probably but few people are aware of the existence of such an organization. The process might easily be shown in any place in which illuminating gas is used, as the retorts for exhausting the coal are well adapted to the cremation of animal remains. A suitable furnace with such a receiver might be erected at a small expense of time or money, and thus inaugurate a system which can do no harm, but may be of incalculable benefit to every community adopting it. Some of our best men are beginning to turn their thoughts to the subject, and it is to be hoped that their efforts in this direction will not be fruitless.

A. N. B.

BOOK REVIEWS.

PROCEEDINGS OF THE CONNECTICUT MEDICAL SOCIETY, 1883. Ninety-second Annual Convention, held at Hartford, May 23 and 24. New series, vol. II., No. 4, 235 pp.

These proceedings contain the practical remarks of the President, Dr. Wm. G. Brownson, in which he recommends the paying of a salary to the Secretary and Treasurer of the Society; discusses the evil of the great growth of new remedies where the physician is tempted to use a new remedy because it is recommended by the manufacturer and thereby descends to the plane of his ignorant, credulous patient, whose authority for the value of a nostrum is a newspaper. He is evidently in favor of an unwritten code. In the record of the proceedings an interesting point to Committee of Publication is adjudicated. A member presents a paper which is referred to the Committee on Publication for a place in the transactions, which paper the committee reject as containing sentiments diametrically opposed to their views. The matter is referred to a second committee who report that the Committee of Publication did right in rejecting the paper, as its contents were not known to either the State or county societies, but that the stated reason should under no circumstances cause the rejection of a paper. This latter report was adopted.

The annual address of the President takes the shape of poetry on the theme of the Country Doctor. Then follows reports on matters of professional interest to the State, including short notes of cases, viz.: Embolism of Femoral Artery; Suppurative Portal Phlebitis; Rheumatism after Ulcerative Endregrelitio, Embolism of the Right Subclavian Artery, by Irving W. Lynn, M.D.; A Case of Chronic Ulcerative Laryngitis by C. W. Chamberlin, M.D.; A Case of Fibro-cystic Tumor of the Uterus, by L. S. Paddock, M.D.; Rupture of â Labium During Labor, by P. Cassidy, M.D. The Result in the Case of Malformation of the Heart, reported in 1882; A Case of Acute Articular Rheumatism with Complications, by L. B. Almy, M.D.; the use of the Hydrate of Chloral in some forms of Convulsions, by Charles James Fox, M. D.; Hysteria Caused by Uterine Diseases, by J. B. Kent, M.D.

More lengthy papers were: Symptoms and Diagnosis of Inebriety as a Disease in Reference to Life-Insurance, by B. N. Cummings, M.D.; The Micro-Spectroscope, by Prof. M. C. White, M.D., in which article he discusses the instruments in use at the present day and their defects in accurately presenting a minute object. His own work is independent of, but in the same direction with that of Dr. Jos. G. Richardson, of Philadelphia, as published in the Philadelphia *Medical Times*. He accepts the micro-spectroscope of Zeiss as the best the market affords, and makes his improvement upon that to secure great accuracy in the measurement of the position of absorption bands seen in the spectrum of the minutest object examined by the microscope, if it is capable of absorbing any definite part of the light passing through it. An excellent wood-cut accompanies the article, without the aid of which further description is useless.

Dr. A. Beardsley discusses the treatment of Intermittent Fever in all its forms, deprecating the excessive use of quinine and advising more attention to hepatic affections, using purgatives containing mercurials, and at the same time aromatic bitters. Dr. J. J. Berry gives his observations on ninety-two cases of knee-joint disease in children. Dr. George S. Pumal presents an essay on some points in Oral Surgery of interest to the general practitioner. An essay on Aspiration of the chest in Pleurisy is by Walter Hamlin Holmes, M.D. Dr. F. N. Branan gives some interesting complications in labor, dwelling especially upon ante-partum hour-glass contractions of the uterus. Inebriate Automatism—a medico-legal study—is by Dr. T. D. Crothers. And Dr. Morris H. Henry has an article entitled "Remarks on the Nature and Treatment of Varicocele," in which he discusses the removal of the redundant scrotum for the purpose of effecting a radical cure, giving the details of his mode of operations.

The volume also contains well-prepared and valuable obituary notices of twelve deceased members, and closes with a list of members, the by-laws of the society and the code of ethics of the American Medical Association.

NECROLOGY.

REYNOLDS, EDWARD, M.D., of Boston, was born in Boston February 28, 1793; died in Boston December 25, 1882. He was the eldest son of Edward and Deborah (Belcher) Reynolds. The Doctor came of old Boston stock, his first American ancestor, Robert Reynolds, having been foreman and a member of the Artilery company in 1634. The subject of this sketch graduated at Harvard in 1811. He then studied medicine with Dr. John Collins Warren, and then went to Europe, where he spent three years in study in London and Paris. While in London, was admitted a fellow of the Royal College of Surgeons. Returning to Boston in 1818, he began the practice of his profession, which gradually ran to surgery, on which branch he gave a course of lectures in State Street. His lectures were well attended, and continued every season for six years. In 1825 Bowdoin College, and also Brown University, conferred on him the degree of Doctor in Medicine. Doctor Reynolds, in conjunction with Doctors Jacob Bigelow, David H. Storer and Oliver Wendell Holmes, founded the Bennett Medical School, in which he taught surgery. In 1824, in connection with Dr. John Jeffries, was founded what grew into the Massachusetts Charitable Eye and Ear Infirmary, now one of the very best institutions of its kind in the world. To this institute Doctor Reynolds devoted much time, energy and means. During the absence of Dr. Warren in Europe in 1837–38 Doctor Reynolds filled his place as Lecturer on Anatomy and Surgery, delivering at the same time his customary lectures at the Medical School. He was delivering at the same time a course of lectures on physiology before the seniors in Holden Chapel. Doctor Reynolds continued his activity and interest in the profession to near the close of his life. His mental faculties seemed unimpaired to the last. Dr. Reynolds in 1821 married Adeline Pratt , daughter of William Pratt, of Liverpool, England. This lady and an infant son died the following year. In 1825 the Doctor married Margaret Wendell, daughter of John Phillips, of Boston. He has one son, a physician, John Phillips Reynolds, of Boston, and four daughters, who survive him. The Doctor was a member of the Massachusetts Medical Society, the A. A. S.; the American Medical Association since 1849. J. M. T.

From data furnished by Dr. H. O. Marcy.

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 12, 1883, TO OCTOBER 19, 1883:

Hartsuff, Albert, Major and Surgeon; granted leave of absence for fifteen (15) days (par. 2, S. O. 205, Department of the Missouri, October 6, 1883).

Huntington, David L., Major and Surgeon; by direction of the President, will, until further orders, take charge of the office of the Surgeon-General of the Army and perform the duties pertaining thereto (par. 3, S. O. 234, A. G. S., October 11, 1883).

Meacham, Frank, Major and Surgeon; assigned to duty at Fort Douglas, Utah (par. 3, S. O. 109, Department of the Platte, October 6, 1883).

Sternberg, George M., Major and Surgeon; granted leave of absence for one month, to date from October 6, 1883, with permission to go beyond the limits of the department, and to apply for extension of one month (par. 3, S. O. 134, Department of California, October 4, 1883).

Taylor, Morse K., Major and Surgeon; assigned to duty at Fort Sill, I. T. (par. 4, S. O. 210, Department of the Missouri, October 13, 1883).

Cronkite, H. M., Captain and Assistant Surgeon; assigned to duty at Fort D. A. Russell, Wyoming (par. 3, S. O. 109, Department of the Platte, October 6, 1883).

Heizmann, Charles L., Captain and Assistant Surgeon; granted leave of absence for six months, with permission to go beyond the sea (par. 3, S. O. 235, A. G. O., October 15, 1883).

Weisel, Daniel, Captain and Assistant Surgeon; assigned to duty at Fort Fred Steele, Wyoming (par. 3, S. O. 109, Department of the Platte, October 6, 1883).

Arthur, W. H., First Lieutenant and Assistant Surgeon; assigned to duty at Fort Douglas, Utah (par. 3, S. O. 109, Department of the Platte, October 6, 1883).

Strong, Norton, First Lieutenant and Assistant Surgeon; assigned to duty at Fort Washakie, Wyoming (par. 3, S. O. 109, Department of the Platte, October 6, 1883).

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING OCTOBER 20, 1883.

Medical Director W. T. Hood and Medical Inspector C. J. Cleborne ordered to the U. S. S. Hartford at Panama, on duty connected with a Court Martial.

Medical Inspector A. C. Gorgas detached from Naval Hospital, Chelsea, Mass., Nov. 10 and ordered to the Naval Hospital, Mace Island, Cal.

Medical Director J. M. Browne ordered as member of the National Board of Health.

P. A. Surgeon A. C. Heffinger ordered to temporary duty at Navy Yard, Portsmouth, N. H.

P. A. Surgeon Robt. Whiting granted leave of absence for three months.

The orders of Surgeon W. J. Simon and P. A. Surgeon M. H. Crawford in last week's report should have read U. S. S. Shenandoah, instead of U. S. S. Trenton.

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. I. SATURDAY, NOVEMBER 3, 1883. NO. 17.

ORIGINAL ARTICLES.

THE RECENT ADVANCES OF SANITARY SCIENCE--THE RELATIONS OF MICRO-ORGANISMS TO DISEASE.

(Illustrated by photo-micrographs projected upon the screen.)

Address of the President of American Academy of Medicine.

BY HENRY O. MARCY, M.D., OF BOSTON.

The unexpected honor which one year ago your kind suffrages conferred upon me in electing me to preside over your councils, I hold to be equally shared by a thoughtful discharge of the duties of the office. The profession at large may be congratulated that the American Academy of Medicine owes its origin and existence to a wide-spread spontaneity of feeling that the times were ripe for, and demanded some organized effort to aid as a controling power in elevating the standard of medicine in our country. How well thus far we have succeeded must be left not to our own prejudiced views, but rather to the unsparing criticisms of all interested in a higher medical education. Since, by our position, we have invited it, let it arouse each one of us to yet better endeavors in the discharge of our self-imposed task. He who studies the history of medicine in a broad philosophic spirit will learn much of both interest and profit. Viewed from this standpoint, its evolution in the present generation in common with its sister sciences, marks an era in civilization. Differences of opinion, even on the fundamental factors of our polity, have and very likely will continue to exist. Other things being equal, the better trained and armed soldiery win and hold the field. Whatsoever the diversity of gifts, the profession should be actuated by one spirit. Under its guidance, moved by a generous rivalry, the divine decree of the golden rule should be its only code. In the clear light of science rationalistic medicine can have no rivals, and the *isms* and *pathies* which smack of ignorance and superstition will cease to exist. New fields of investigation yet more attractive, because nearer to the great source of truth, will open and there will yet arise a more noble emulation for the still greater advancement of a united and harmonious profession.

A few weeks since as I stood on the rock-bound coast of the bay of Fundy, and beheld its insurging tides, rising more than half a hundred feet, converting empty gorges into deep rivers, and wide-spreading meadows into broad bays, I read in this mighty unseen force the symbol of the progress of our age. The quiet waters of the harbor of Louisburg whose blue expanse covers the wrecks of the French and the English armadas of a past century, at whose stormy burial sank the hopes of nations, who would fain have founded in a new world empires based upon the aggrandising ambitions of kings and clergy, gave no hint save in the mournful desolation of its shores of a fatal policy which so long dominated the ages of the past. In the busy sub-divided occupation of happy peoples, each individual adding to the common store of good, national interests interwoven in one grand commonality by the iron bands of commerce, we mark the monuments of our age, in the elevating of the masses to a higher plane of intellectual and moral development than the world has ever seen.

In the proud contemplation of such progress, the thought arises, have the science and art of medicine grown in ratio with the general development of the age? To discuss a question of such magnitnde in the short hour at my disposal would provoke a smile. And yet, stimulated by the belief that, although proud of present progress, we are on the eve of far greater discoveries and clearer knowledge, we would counsel and urge upon the Academy the greatest devotion and most enthusiastic zeal in elevating the standard of medical education.

The late lamentated Dr. Edward H. Clarke, of Boston, whose memory is enshrined in the loving remembrance of many classes of pupils, divided the teachings upon materia medica into a course for two years, one devoted entirely to the *circumfusa* of the patient, and one to the *medicines* which might be administered. In a somewhat similar spirit I would divide the duties of our profession, and would place first the prevention rather than the cure of disease.

Sanitation can hardly be called a science. Many of its most important factors are, at the best, but imperfectly understood. The sanitary laws instituted by Moses are based upon principles which cannot be under-estimated or ignored, and the Egyptians for centuries previous had understood some sanitary questions and their solution better than ourselves. The traveler to-day may see in the elegant courts of the old Pompeian houses the marble basins, with their leaden pipes and stop-cocks still seemingly ready to turn the treasured waters of the distant mountain into their old time-accustomed chambers alike to bath and fountain, and go again singing in joyous cadence, ministering to need and pleasure as they found their way through the once busy city to the

bay below. Our modern systems of water carriage to remove sewage, is but the adaptation of means to ends well recognized by the ancients, and it would to-day be difficult to find a better specimen of sewer or masonry than the Cloaca Maxima of old Rome. That age of Grecian prosperity and extraordinary intellectual activity, which gave to the world Pericles, Sophocles, Aristophanes, Pindar, Plato, Xenophon, and Socrates, also furnished Hippocrates, the father of medicine. He it was who formulated the fundamental principles of sanitary science, "Pure air, pure water, and a pure soil." The little island of Cos was his home, and here was located one of the most celebrated temples of the Asclepiadæ, or priest physicians of the Greeks. If Hippocrates, living upon this pearl of the Ægean archipelago, whose leafy groves were musical in the evenly-tempered, balmy breezes which ever played in health-giving zephyrs, whose gentle rills were fed from springs gushing forth the distilled dews of heaven, whose verdant slopes, basking in the clear, warm sunlight, were kissed by the deep blue waves of the Mediterranean, the very place of ideal purity and loveliness, recognized the importance of such maxims, what should be their value to the multitudes crowded at the behest of commerce in localities selected without thought of sanitary surroundings?

The discussion of the problems of life, and the important factorage of ills thereto belonging, by the wise and thoughtful of the ages long ago, is not alone instructive, but has a fascination of its own. Whatever else may be said of Mohammedism as a code of morals and virtue, its cardinal principles of cleanliness and careful living deserve special recognition at the hands of science. The great plagues of the middle ages and the desolations following the crusades which swept over Europe, were filth diseases of a preventable character. Although spurred into recognition by the bitter experiences of the passing generations, sanitary science is yet under only partial recognition of the laws, and a popular interest is scarcely aroused, even among our more intelligent classes of citizens.

The vital processes, in their sway over matter, hold the balancing between waste and repair. This hypothetical equilibrium is perhaps the best definition of health, and the safe removal of the waste, worn out material is one of the chief factors of sanitary science. This to the individual as ordinarily situated, might seem a question for easy solution. In the wide stretches of country surroundings, although there are many exceptions, this is generally true, but in the crowded conditions of city life there is no problem more pressing or complex. The law of decomposition is *vital* rather than chemical, and in the changes which ensue there are reproduced in the most marvelous abundance lower forms of microscopic vegetable life, which in their death-dealing danger are far more potent than the evolution of noxious gases. The relation between the house we occupy, its location and surroundings, its water supply and the best means of removal of waste, are as yet but imperfectly understood. The local causes in the production of disease are occupying in a greater degree at present than ever before the best scientists of the medical profession. Although many vital points are yet undetermined, great progress has been and is being made. It is sufficiently established that the water drank, which is contaminated with the specific infection of cholera, typhoid fever, and other diarrhœal diseases, will at least in certain conditions of the system reproduce these diseases, and if these conditions are widespread an epidemic will ensue. A similar law holds good in reference to malarial or intermittent fever, although it is very probable the sources of contamination are not confined to the water supply alone. Heat, moisture, and the resulting decomposition are the seeming gross factors, but it is quite certain that minute living organisms introduced into the system are the potent factors in the production of these diseases.

The condition which this age of steam brings, with its modern miracle of civilization, massing the population in great centers, gives new sanitary problems of a very difficult and complex character.

Surrounded by a media from which there is even momentarily no escape, and which we must ever breathe, atmospheric impurities must be considered as of the highest importance. The air has no absolutely fixed normal composition; however, its two essential elements, oxygen and nitrogen, under ordinary circumstances, are so nearly invariable, they may be re regarded as stable factors. Although, in a simple mechanical mixture, the air is very rarely free from carbonic acid and water, yet carbonic acid, so far as known, is a harmless, but superfluous agent to the animal economy, while, on the contrary, to the vegetable world it is food of the most important character. Some plants go through their entire period of evolution, dependent only upon this element and water. The mechanical admixture of water in the form of vapor is a constantly varying factor, dependent upon location, climate, temperature, etc., and, although rarely entirely absent, is of itself an element comparatively unimportant, but, combined with other factors, it makes possible the development of lower orders of the vegetable organisms, to which we are now warranted in ascribing some of the most dangerous and widespread diseases of the entire animal kingdom. In its indirect bearings upon climatology, influence upon heat, etc., atmospheric moisture is of the first importance.

In the analysis of air, ozone, from its admitted powers, especially in its bearing upon climate and health, should be carefully considered. It is an allotropic form of oxygen which has attained new properties, of an intensely active character, supposed to have been chiefly produced by the action of electricity. Its molecular weight is 48, oxygen 32, and its density is about one and one-half times greater than oxygen. According to Houzeau, the maximum qnantity of ozone in the air never exceeds $\frac{1}{700,000}$ part of its bulk, and it is often entirely wanting. More ozone is found during the night than the day; in winter than in summer; upon high rather than low lands; in country than in town; and most of all, after a severe thunderstorm.

Ozone owes its great value as a disinfecting agent

to its exceedingly powerful oxidizing qualities. The compounds of ammonia, phosphorus and sulphur are acted upon with great rapidity, and the odors resulting from animal decomposition are removed instantly. It is probably destructive to all the minute vegetable organisms when in active development, but its effect in destroying the vitality of the spores of plants has not yet been determined.

From the exceedingly active properties of ozone in destroying the low forms of vegetable organisms, and consequent prevention of putrefaction, as well as the induction of catarrhal affections, when experimented with artificially, the important query of its value as a factor of atmospheric composition, and its relationship, if any, to epidemic diseases, has arisen. A committee of the American Medical Association, under the efficient leadership of Dr. N. S. Davis, of Chicago, during the last three years has been doing a considerable amount of work in the solution of this important, but complex problem. Under their direction, careful tests to determine the amount of ozone in the atmosphere are daily made in a number of our large cities, in which localities clinical records are taken by a number of independent observers, to ascertain the initial date of acute diseases. Reports of progress have been made, but sufficient data have not yet been secured to warrant any general conclusions. The committee desire a wider interest and assistance in the further accomplishment of a work which promises to be of great value.

[1] "There is much evidence in favor of adopting the analysis for oxygen, instead of that of carbonic acid, as a test of atmospheric purity; the test would be an absolnte one, if we could be sure of the uniformity of the proportion of oxygen in pure air. Taking this, as we probably may, for granted, we can say that the carbonic acid, in most cases, increases directly at the expense of the oxygen of the air, and therefore a diminution of oxygen points logically to an increase of carbonic acid. There is this disadvantage in taking the oxygen test, it removes from view the accidental impurities, such as the discharges from chimneys, which are certainly important."

Carbonic acid is a product of combustion, and in its formation represents in nearly fixed ratio the destruction of oxygen. The entire animal kingdom is constantly consuming oxygen and emitting carbonic acid, and atmospheric conditions dangerous to life would ensue, were it not for the equilibrium maintained by the consumption of carbonic acid and generation of oxygen by vegetable growth. Owing to the remarkable diffusion of gases, the wind currents, etc., the immense amount of carbonic acid poured out into the air as the product of combustion never produces atmospheric changes in any marked degree. It is estimated by Smith that in Manchester, from this source alone, over 15 tons of carbonic acid are produced daily, and yet, when this is added to the product of respiration and animal waste, he found the entire quantity was not sufficient to raise the average percentage above four parts in ten thousand, which is within the so-called normal limits of a number of investigators. The decided increase of carbonic acid in cities is due mainly to the confinement of air in courts and alleys, and the sanitary lesson should be, the construction of wide streets with open courts or squares.

Too much importance has been placed upon carbonic acid as a deleterious constituent of the atmosphere. Very little, if any, annoyance is felt from the accidental escape of pure carbonic acid in the charging of soda fountains, although the air may contain two per cent. of the gas. Förster states that he had no difficulty in remaining ten minutes in a cellar containing fermenting wine, although the carbonic acid gas amounted to forty parts per thousand.

There is a vast difference when the oxygen is lessened in proportion as the carbonic acid is increased, as, for example, the entering of a chamber where candles are burnt until extinguished for want of oxygen, or again, where the carbonic acid is produced by respiration. The presence of this gas in living-rooms in any appreciable quantity is of the first importance, not so much as a deleterious chemical agent, as because of the bad company in which it is found, and the presence of which it indicates. One serious objection to the numerous gas jets of the brilliantly lighted salon and audience room is found in the fact that the ordinary burner consumes as much oxygen as four persons. From a sanitary standpoint, lighting by electricity will be a great gain, and this evil will be obviated. One large room in a Lowell mill, lighted by 400 gas burners, had been ever a source of complaint in its defective ventilation and great heat. Lighted by electricity, the change was surprising, while the difference in temperature was over twenty degrees.

Products of decomposition from cess-pools, the organic exhalations from respiration, the lessening of oxygen from the combustion which is going on in brilliantly lighted rooms, all these are dangerously infective and devitalizing elements which demand a system of ventilation usually ignored in modern house-construction.

From the address upon State Medicine before the American Medical Association at St. Paul, 1882, by Dr. Gihon, Medical Director, U. S. N., I quote, all too briefly, "So long, however, as society in its highest development of rank and culture, ignorantly jostles and wedges itself in contracted parlors and drawing-rooms, already defiled by blazing gas-jets and defective furnaces, where hundreds of lavishly dressed human machines befoul the air and poison one another with the noxious gases and their own effete animal products in deadlier quantity than the ragged rabble which herd in the open street, and call this pleasure; so long as godly people drowse and yawn in badly ventilated churches surcharging their brains and impairing their minds with blood not half ærated, and ungodly ones exhaust their whole reserve force to resist the insanitary influence of the no less badly ventilated theater and exhibition hall, and call the one pious worship and the other rational amusement; so long as men toil to amass riches and then build residences palatial, or sham palatial, and in the name of luxury and æstheticism flood them with artificial

[1] The Atmosphere. By D. F. Lincoln, M.D, Ziemssen's Cyclopædia, Vol. xviii, page 605.

light and heat to consume the oxygen which prince and beggar must breathe, and admit the invisible filth by the sumptuously decorated closet and bath-room by which they think to exclude the vile necessities of humanity which prince and beggar alike cannot escape, and call this comfort and refinement; so long as our children are sent to overcrowded and unwholesome schools, where their eyes are bleared, their hearing dulled, their plastic bodies distorted and their brains fuddled, and call this education; so long as men and women violate daily in themselves and in their children the simplest precepts of hygiene, parents countenancing half-dressed daughters wearing out their strength in unwholesome ball-rooms, seeking their slumber that cannot refresh only when dawn appears; sons launched upon the world to encounter physical wreck in a thousand channels where no beacon warns of danger; old men, senators, judges, divines, perchance learned doctors, uncomplainingly breathing the foul air of public conveyances and apartments in which every door and window have been carefully closed and ventilator carelessly ignored; streets reeking with filth which decrepid laborers play the farce of sweeping in broad daylight; what can State Medicine hope to accomplish in legislative chambers and halls of Congress which are themselves *even* evidences of sanitary ignorance, sanitary neglect and sanitary indifference?"

The foreign ingredients of the atmosphere are very various; as dust they are carried great distances by the wind and deposited often hundreds of miles from their source. African organisms have been found in the air of Berlin. It is often difficult to obtain air free from the pulvurulent debris of vegetation, and both vegetable and animal organisms abound. From the vegetable kingdom come pollen, vegetable hairs, fibers, scales, cells, seed capsules, etc., also spores of fungi and various forms of bacterial growths in marvelous abundance. In the air of living-rooms we may find portions of food, animal and vegetable fibers, pus globules, fatty crystals, scaly epithelium, and a number of the micro-organisms.

[1] Dr. Sternberg, in his report to the National Board of Health, says: "The fact, observed by myself, that during the summer months the mud in the gutters of New Orleans possesses an extraordinary degree of virulence, shows that pathogenic varieties of bacteria are not alone bred in the bodies of living animals. The more I study this subject the more probable it seems to me that in this direction lies the explanation of many problems which have puzzled epidemiologists, and that the sanitarians are right in fighting against filth as a prime factor in the production of epidemics; a factor of which the *role* is easily understood, if this view is correct. The presence of septic organisms, possessing different degrees of virulence depending upon the abundance and kind of pabulum furnished them, and upon meteorological conditions more or less favorable, produces, in my opinion, the *epidemic constitution of the atmosphere*, which wise men were wont to speak of a few years ago as a cloak for ignorance. It must be remembered that the gutter mud of to-day, with its deadly septic organisms, is the dust of to-morrow, which, in respiration, is deposited upon the mucous membrane of the respiratory passages of those who breathe the air loaded with it."

The spores of certain forms of these lower orders of vegetation have a remarkable vitality. They are of extreme minuteness, often less than a two hundred thousandth of an inch in diameter and have resisted a dry heat quite above boiling water. Tyndall was the first to make popular the test of a beam of light through the air as one of the best to show the presence of minute particles. Indeed, it is only owing to these particles that the beam of light is revealed, for in purified air it ceases to be visible, and air thus purified no longer possesses the power of exciting putrefaction in albuminous fluids previously sterilized. From the almost universal presence of these minute forms of micro-organisms and their difficulty of exclusion arose the belief in spontaneous generation. Owing to a better knowledge of these organic constituents ever present in confined spaces and the dangers therefrom to wounds, has arisen the revolution in surgery during the last decade.

By a slower process because beset with far greater complications and difficulties, there is being surely evolved the so-called germ theory of disease which, although not dependent upon the atmosphere alone for the spread of contagion, is the more usual medium for the dissemination of infection. The organic matter exhaled from the lungs is molecular and is disseminated by atmospheric currents. The odor from the decomposition of these organic elements is generally perceptible when the carbolic acid reaches 7 parts in 10,000, and is strong when it amounts to 10 parts. The microscopic examination of these exhalations into the air of crowded rooms, when condensed with the vapors upon the cold glass of the window often shows them to be undergoing decomposition, in the process of which are developed confervoid growths intermingled with myriads of bacteria and micrococci. One danger from tuberculous patients may be found in the careless disposition of the sputum. This not seldom falls to the ground, is pulverized and distributed as dust. In respiration of the atmosphere thus infected the bacilli are lodged upon the mucous membrane of the lungs. In the laborious researches recently published of M. Vignal, of Paris, upon the bacillus of tubercle, he dried in a flat recepticle some sputum containing bacilli; this he afterwards pulverized, then moistened and subsequently dried. The specimen was in this way moistened aud dried eight times, and the bacilli were as abundant as in the fresh sputum.

Owing to the multiplicity of agents and causes rendering air impure, its analysis has, as a rule, been very uncertain and unsatisfactory. The term albuminoid ammonia, much used in the analysis of air as well as of water, has usually represented a whole series of of unknown factors. Like amaurosis of the eye by the older writers it gave a learned phraseology to ignorance and disfigured science, much in keeping with the making of the geographical map of our boyhood, where the vast unexplored region of the terri-

[1] Special Report to National Board of Health, April 30, 1881.

tories this side of the Rocky Mountains was called the Great American Desert.

It was first noticed by Gay Lussac that all the nitrogen of organic matter when heated with caustic hydrates appeared as ammonia. Albuminoid compounds, when disorganized by the growth of the lower forms of organisms, set free ammonia, and the quantity of the free ammonia may, in a general way, serve as a standard to indicate the amount of decomposition which *has* taken place.

The term albuminoid ammonia, on the contrary, stands for the quantity of nitrogenous material in air or water which *may* serve as food for the growth of these infinitesimal organisms. This as yet undecomposed organic matter is not by any means in itself necessarily hurtful, although always objectionable. Combined with moisture at ordinary temperatures, it furnishes the condition for bacterial growth and may prove sufficient for the development and spread of an epidemic of some one of the class of contagious diseases. We can have no chemical test for discriminating between hurtful and harmless organic matter, since the poisonous infection is *vital* and where found must ever be looked upon with suspicion.

I take great pleasure in referring to the microscopic investigations of atmospheric impurities by Surgeon J. H. Kidder, U. S. N., Washington, published in the report of the Surgeon-General U. S. N. 1881, and continued in report for 1882 by Passed Assistant Surgeon T. H. Streets.

The material for examination was collected by the use of a funnel-shaped instrument connected to a winged vane causing the opening to face the air current, which is made to impinge upon a slide placed horizontally, a portion of which has been moistened in glycerine. In out-of-doors air thus collected and examined. he enumerates the following substances as the most important:

1. Epithelium from the skin and mucous membranes.
2. Vegitable epithelium and unrecognized debris.
3. Hairs and threads of various fabrics.
4. Particles of sand, glass, metals, soot and starch.
5. Parts of the chitinous shells of small insects.
6. Bits of feathers and the pappus bristles of composite plants.
7. Minute, highly refracting dots, simulating *micrococcus*.
8. Crystals of various forms and sizes.
9. Pollen spores of many different kinds.
10. Leaf hairs.
11. Mycelium and spores of fungi.
12. Nucleated cells resembling leucocytes.
13. Bacteria, as *bacterium*, *vibrio*, *bacillus* and *micrococcus*, and under the forms of aggregation known as *zöoglaca*, "swarms," *leptothrix* and *torula*. Dust collected dry, by simple exposure of slips and disks to the air, contained sand, soot, etc., and numerous crystals, mostly rods and radiating needles. And, finally, the disks and tubes containing collections made in hospital wards abounded in epithelium, starch, cells resembling leucocytes, and threads and hairs. Epithelium, as appears from the foregoing summary, is always and everywhere present in the air. Considering the probability of the communication of contagious exanthemata by this mode, the constant presence of epithelium in the air becomes a fact of considerable hygienic importance.

Minute, highly-refracting dots, very numerous in winter dust, are likely to be mistaken for *micrococcus*, especially when mounted in fluid and agitated by the Brownian movement. "They are usually the most minute parts of coal ashes, and may be distinguished from organic forms by the fact that they are not affected by strong sulphuric acid. After a long series of observations I am, however, constrained to believe that there is no absolute reliance to be placed upon identity or similarity of form in the recognition of crystals occurring in dilute solutions."

In the sanitary investigations of Dr. Streets, the cultivation of the organisms of atmospheric dust gave most interesting results. The rare form of *bacillus ruber* accidentally appeared in some of the culture tests and was made the subject of a number of laboratory studies and from their cultivation the air of the laboratory became so completely infected with them that unless extraordinary care was exercised they appeared as a pervading element in all cultures.

From my own laboratory studies I have been made aware of the great difficulty in excluding germs during the manipulation of sterilized nutrient fluids. To the special student, Dr. Street's observations are of great interest. I cannot forbear quoting concerning his growing the bacillus ruber upon rice under a bell jar in a darkened room. Whenever the bell glass was removed the nostrils were greeted by an agreeable odor of apples; several persons noticed it. * * * The bacillus (Beck's No. 10 immersion) was shown to be in single rods or two joined together, rarely four or more united. Each rod enclosed two brightly refracting granules usually one at either end. The movement of the rods was active and perpendicular to the stratum of liquid in which they swam; moving points only were seen coming apparently in contact with the thin glass cover, as their motion became less active the rods floated horizontally in the liquid.

A proper discussion of the impurities in water would far exceed the limits of this entire paper. Chemically pure drinking water is neither necessary or wholesome. Soaking into the earth certain mineral constitutents must be present in varying quantity. These have long been recognized and may be easily determined. In all natural waters there is more or less organic matter in solution. This is reduced to the minimum in the supply from springs and deep wells properly protected. Organic material may not be harmful, dependent upon its character; dissolved vegetable material may deeply color the water, or the low form of algæ give it a very disagreeable taste without being especially harmful; on the contrary clear, sparkling, tasteless water may contain impurities in the highest degree dangerous. Water containing albuminoids in solution, if allowed to become standing is sure to undergo deleterious changes, from its infection by the ever present atmospheric germs which utilize these products as food and reproduce in num-

bers utterly beyond conception. It is owing to such infection that the water draining from swamps and marshes, especially in hot climates has ever been a prolific source of intestinal diseases.

As in the discussion of atmospheric impurities, we found the ever-present moisture an important factor, so in the treating of the water supply, soil pollution must be necessarily therewith taken into consideration. In this relation no question is more important than the power of the soil to purify water by filtration and the retention therein of injurious products. The albuminoid compounds may here be utilized as food for the higher order of plants, and thus be extracted from aqueous solution. Under the influence of sunlight oxidation destroys many of the lower growths, and air and water both thus become purified. It has long been recognized that certain soils in time loose their ability to filter out the impurities from polluted waters. Many cases of disease and even epidemics have been traced directly to the use of water containing sewage that had passed a greater or less distance through the soil. It is apparent that this danger has been greatly underestimated by all classes. The specific contamination of the ground water and thereby of the supply for household use, is the more common and wider spread source of certain of our most dangerous diseases, the example of which best known is typhoid fever. It is also an established fact that the air which every where permeates all soils to the ground water moves in consonance with every barometric change of the outer atmosphere; these air currents, also modified by heat, are of importance from a sanitary stand point. Every vault, every cesspool, is a source of pollution, and these sub-soil air currents are drawn into our cellars from all directions when they are used as is the custom in most of our northern cities, as the source from which the heat in winter is destributed through the house.

The recognition of this danger caused the National Board of Health to institute a very elaborate series of investigations in order to determine the extent to which different soils are able to filter thé injurious properties out of the air passing through them. The most interesting report upon "the relation of soils to health," by Profs. Smith and Pumpelly can here only be referred to. Their conclusions show the utter worthlessness of sand as a filter for germinal matter. Our government in no wiser way could aid in the general well-being of her citizens than by the continuation of such investigations.

"The facts here brought out seem to us of importance considered with reference to the sources of supply of our drinking waters; the relative location of wells, cess-pools, etc., in our towns; and also with references to the methods of removal of excreta, especially during the prevalence of an infectious disease, the infectious materials of which may be communicated through water. A good bed of sand has sommonly been regarded as one of the most efficacious forms of filters, amply protecting our well water against all contamination, even though the wells be sunk at no remore distance from sewers, cesspools, cemeteries, etc. But we see that sand utterly fails to remove germs of putrefaction, such as are normally found in the air and in water from liquids while its power of absorbing dissolved matter, organic or inorganic must also be seriously questioned.[1]"

The subject of germ transmission through the soils demands on the part of sanitarians the most searching investigation, not only on account of the possibility of contamination of our drinkicg waters, through infiltration of germs, but also because the air especially in our dwellings may become infected if the soils in their natural condition possess no power of retaining germs or their adult organisms. For whenever in an infected soil the ground water from any cause rises to the surface, germs may be carried with it, and upon drying be taken up by the atmosphere."

The importance of a supply of pure drinking water cannot be over-estimated, and its pollution is in a very large degree due to germ contamination. This is no exception even in sparsely settled country districts. In New England, almost entirely exempt from malaria, the danger from specific contamination of the drinking water is shown in the marked increase of typhoid fever. In Massachusetts alone there occurred, from 1840 to 1880, 390,000 cases of typhoid fever and 40,000 deaths.

In the military service, during the late bloody contest between the States, zymotic diseases caused a larger number of deaths than resulted from all the battles of the entire war. We quote from the report of the Surgeon General: "The entire number killed in battle and died as the result of wounds was 93,443; died from disease, 186,216; died from zymotic diseases alone, 108,666." If to these hecatombs of victims, sacrificed in the vigor of early manhood, we add the suffering represented by over 1,700,000 reported cases of diarrhœa and dysentery, and 1,100,000 cases of malarial fever, every village and hamlet of our broad domain still having its representatives of wrecked humanity from these causes, we gain some idea of the dangers resulting from insanitary conditions, although our armies were in service in a mild climate, and the best clothed, fed and housed soldiery the world has ever seen.

The number of deaths in the United States during 1880 from diphtheria alone, was 38,398, a proportion of 51.33 per 1,000. From typhoid fever there occurred 22,905 deaths, a proportion of 31.21 per 1,000.

These terrible scourges, like consumption, are the messengers of death which make their daily visitations, and to which people have become so accustomed as to regard their ravages as the inevitable, or, as the clergy have been wont to express it, "the hand of divine Providence laid heavily upon us." The medical profession talk learnedly of the wise means adapted to the cure. Different schools of pharmacists have their vaunted remedies, but the sad, humiliating lesson of the mortality tables teaches that these invisible monsters are stalking broadcast over the land, seizing prince and beggar alike in their remorseless grasp.

Since the history of man, the wise of all generations have sought for the cause of disease, yet it would

[1] Supplement No. 13, National Board of Health Bulletin, p. 18.

appear that the key to many of these labyrinthian mysteries has been reserved as one of the triumphs of science for the latter part of the nineteenth century. It is now generally conceded that the danger to wounds is a particular organic infection, which, like the virus of inoculation or vaccine, germinates, and induces systemic poisoning. The whole subject of modern wound treatment is based upon the recognition of this ever threatening danger, and securing the best means of its avoidance. This recent recognition of the dangers from the simplest form of microscopic vegetable growth, has evoked the important question of the means best adapted for their destruction. Extremes of heat and cold are by far the most universal, and are the wise measures which nature has adopted as limitations to their development. For a long time carbolic acid has been the surgeon's *sine qua non*, and the agent most trusted for the disinfection of the sick-room. A long series of careful laboratory investigations conducted under my supervision have given results not unlike those of Koch and Sternberg, and place the bichloride of mercury pre-eminently at the head of the list of germicides.[1] The solution of one part to 2,000 is as trustworthy as the 1 to 20 of carbolic acid. Properly marked to guard against danger, such a solution may be wisely brought into requisition in every household. Under the light of its new values, preparations of mercury in certain diseases are likely to be restored to their old-time professional confidences, and teach that the clinical deductions of the fathers were not without foundation in fact.

The first of the diseases, and the one the clear history of which is perhaps the best known, is anthrax, or malignant pustule. Here the rôle of specific micro-organisms as cause and effect has been conceded. No more interesting subject could command attention than the analysis in detail of the entire group of zymotic diseases. In a purely conservative sense it is not too much to claim, that it may be shown that each of these affections has its origin from, and owes its dissemination to, a *contagium vivum* of a definite, particular character. We do not, however, intend by this to convey the meaning, that our knowledge as yet, if ever, enables us to differentiate each individual factor.

In the light of recent astonishing discoveries, no wise man would prognosticate a limit to our future knowledge in this direction. Certainly, the greatest progress in medicine since the days of the fathers is this pertaining to the causes of disease. It is not too much to predicate as possible, or even probable, that the medical art, in the near future, will hold control over the entire class of zymotic diseases as effectually as vaccine has controlled and relegated to an almost hypothetical danger the terrible scourge of small-pox, which ravaged humanity during the many centuries of the historic past.

The laborious researches of our distinguished friend, Dr. Henry I. Bowditch, in establishing the relation of soil moisture to consumption, builded for himself a monument more grand and enduring than granite or bronze. The ineffable something, of the existence of which he was equally sure, remained for younger eyes to discover, and the patient, painstaking labors of a well-trained German student to demonstrate the specific bacillus tuberculosis.

It is very probable no publication of modern time has awakened so much discussion or caused the undertaking of so great an amount of study and investigation. Dr. H. C. Ernst, of Boston, read an exhaustive paper in part—a Contribution of Laboratory Work, before the Massachusetts Medical Society in June last. He made a table of references to fifty publications upon the subject, and I am quite sure I have seen nearly one quarter as many more articles published since this date worthy of reference. Dr. Ernst's conclusions are as follows:

I. A staff-shaped micro-organism exists in all forms of the tuberculous process, and its presence has been demonstrated in them.

II. It is more abundant in the rapid than in the slow form of the process.

III. Its specific nature as the cause of tuberculosis is claimed by Koch on the ground of his observation.

IV. Its specific character has not been successfully refuted by trustworthy observations.

V. Its value as diagnostic evidence of tuberculosis is very great, although its absence cannot be considered as excluding that process.

The latest novelty in the germ theory of disease is found in the ingenious exposition of the yeast fungus as the cause of diabetes, by Prof. Ekland, of Stockholm.[1] It is offered as theory rather than demonstration, and yet the array of facts brought to support this explanation if not conclusive throws at least new light upon this disease which has ever been considered a dark enigma.

Dr. Hassall communicated a paper upon the Development of Torulæ in Urine to the Royal Medical and Chirurgical Society of London, in 1853, in which he arrived at the conclusion that there is a species of fungus which is developed in urine containing even minute traces of sugar which may be considered characteristic since it occurs in no other condition of the urine. Dr. Beale[2] says: "This is the sugar fungus. But neither the character nor the occurrence of the fungus are sufficiently constant to enable us to accept implicitly Dr. Hassall's conclusions as to its value as a test for the presence of sugar. The sugar fungus which grows in diabetic urine is identical with the yeast plant." From the above it would appear that both Drs. Hassall and Beale believed these organisms developed only after the exposure of the urine to the atmosphere.

In the archæological museum in Cambridge may be seen whole series of adult skulls from certain of the prehistoric races of South America with perfect teeth. The mouths so well furnished are also closed to our interogatories of the why. The last generation of Americans living upon hot bread and fried meats might have been described as a teeth-aching race. Our native genius rising to the necessity of a felt want evolved a new profession, earlier

[1] See *American Medical Association Journal*, August, 1883—Germicides and Their Relative Values.

[1] N. Y. Medical Journal, July 28, 1882.

[2] Kidney Diseases and Urinary Deposits. Third edition, 1870, p. 323.

called the dentist, now the dental and oral surgeon, and the present generation may be styled a teeth-preserving and teeth-manufacturing people. An army of ten thousand trained specialists are busily engaged at an estimated annual cost, in the United States alone, of from forty to fifty millions of dollars. In the highest consideration this is a very imperfect compensation for the damage done these comparatively minor members of the body by the ever present micro-organisms which riot in this usually filthy cavity. An antiseptically clean mouth and our dentists would become rivals of the historic McCawber, and dyspepsia be placed at the bottom of the lists of diseases.

A blind man no matter how well armed and how active is a dangerous ally ; his blows may fall equally upon friend and foe. How can one who is blind as to causation direct as to the prevention of disease?

The fundamental basis of all sanitary law, and I may also say of the treatment of disease, lies in the aquisition of such causative knowledge. The application of sanitary law to city life must demand an atmosphere reasonably free from the defilement of of organic waste. This necessitates a system of sewerage which shall continue from the house in a steady unbroken current to its discharge at a safe distance from habitation. This current should be of sufficient rapidity to prevent sedimentation, and deliver the house products before time sufficient for putrefaction, even in summer, has elapsed. This can never happen in the systems now in use in those cities situated upon the sea shore, since here the sewers are practically tide-locked a large fraction of the day, and a cessation of current with sewerage deposit must ensue, while a backward pressure is necessarily produced upon the sewer air which, loaded with organic products, must escape into the house through any one of the water traps now in use.

Sewer-gas poisoning, which means air changed not so much in its chemical constituents as defiled by organic impurities, is thus by no means in our best constructed houses a hypothetical danger, here often the greater, for the costly luxuries of water-closets and basins are each a standing menace, and are to be regarded with suspicion. Boston which has and yet continues to drain into its back-bay and harbor its sewerage by more than fifty outlets, is upon the eve of inaugerating its new system at an expense of nearly $5,000,000, by which the sewerage is to be pumped into a storage reservoir situated upon Moon Island and discharged into the out-going tide, and thus protect the harbor from defilement by sewer drainage.

The wise political economist and world renowned historian, Mr. George Bancroft, in discussing the future of civilization, once said to me: "I look upon New York city as the future commercial metropolis of the world, a great center of ten or fifteen millions of inhabitants." This prophecy of years ago has gone on towards a steady fulfillment, until, like London, she exacts tribute from the entire world. Situated upon a narrow neck of land between a mighty river and a deep bay, it would seem that good soil-drainage would be most easily secured ; and yet her sanitary authorities state that the imperfect, incomplete, and broken sewers have caused the soil of whole districts to become so charged with sewage that the saturation point is reached. Nearly four millions of people pour their waste into the river and harbor, as is most convenient, while miles of her shores are fringed with wooden wharves built upon piles, not alone themselves undergoing decay, but a fertile source of detention of putrefying material. The New York physician will tell you that, no matter what disease he has under treatment, it is with the added factor of malaria from such defilement. Rich and poor must alike suffer from such danger, and if the prophecy of America's distinguished scholar is to be fulfilled, New York must take her sewage out of the harbor, and rival Liverpool with docks of solid granite for the merchandize of the globe.

The water supply must ever be pure and ample. The extraordinary expenditure necessitated by most cities has made water a costly product. Rivers and lakes in sufficient proximity for such use are liable to defilement from suburban towns and manufactories, and only by the greatest vigilance can pollution be prevented. Boston has freely expended her millions upon a water supply confessedly inadequate in amount, and of a character which is a constantly recurring source of complaint and danger. Much of her water supply is retained in artificial shallow storage basins, from which the surface soil was never removed, and whose water-shed comprises a very considerable population ; and Natick, with its 8,000 people, still drains its waste into Lake Cochituate, the original source selected for the city supply.

The Board of Health returns for Boston, August, 1883, out of a total of 521, gives from zymotic diseases alone 194 deaths, while 135 cases of typhoid fever were reported.

For September, a total mortality of 765, there were 253 deaths from zymotic diseases, and 215 cases of typhoid fever reported.

With astonished gaze the traveler views the great arches spanning and crossing the Campagna, which once bore to old Rome the pure waters of the distant Albian mountains. The last generation of scant population, with singular energy and foresight, at the behest of commerce, wedded by a water way, more than three hundred miles in length, the great lakes with the Hudson river. The twentieth century will exhibit yet greater marvels for the securing of pure water. The project is already under discussion to supply the great metropolis from no nearer source than Lake George, with the thought of protecting its water-shed from further pollution, and carrying its pure, sparkling water to the thirsty city at an estimated expense of no less than two hundred millions of dollars.

The danger from the dead must not be forgotten. As we invite our friends to sympathize in our sorrow let it not be to their peril. Revive, if need be, the custom of Egyptian preservation or re-inaugurate the use of the Roman funeral urn, but do not sow the seeds of an epidemic of the ever prevalent contagious diseases by our present display of decomposing remains, adorned as if for a reception. Let the

genius of some sanitarian devise a casket, at once hermetically sealed, rather than do violence to time-honored custom or shock the deepest and most sacred feeling of broken hearts by urging cremation. The public health act of Great Britain makes the holding of a "wake" over the body of one dying from contagious diseases subject to a fine of five pounds. Let American authorities equally protect from similar dangers.

We turn reluctantly from the consideration of questions having so great and vital an interest to the medical profession, and of primary importance to the entire animal kingdom. If Rip Van Winkle experiences be granted to us in the twentieth century, with little aid of the prophetic power we may forecast some of the advances then made known to us of our science. In the light of past history, with its fashions and foibles of the *medicamenta*, few would presume upon the mission of its pellets and powders.

Surgery and sanitary science are, however, based upon entirely different factors of our knowledge and must remain the great corner-stones of a divine art, as wide-reaching as humanity. Upon these shall be builded the grand Æsculapian temple of the future, where will be taught a science foreshadowed in the deeds of the great Galilean Master.

The citizen must not be lost in the physician. A Republican Government demands service of all. As I turned from the motley crowd in Castle Garden I shuddered at the thought that these men were so soon to be my peers in our government, but the bright-eyed children, hiding in the scanty skirt of the mother, looked hopefully up, as if to say, "Welcome us in our escape from the oppression and over-crowding of the centuries." Then came the vision of our broad domain scattered all over with school-houses, academies and colleges. Rosy-hued with health, in youthful vigor, our women in tens of thousands have devoted their best years to the training of the young. Four hundred American colleges and universities with open doors invite to a higher education. Universal knowledge is the Republic's only safety, and further needs have only to be made known to be liberally met by the generosity of the American people. The necessity for research and pure science are recognized as never before, and may the day soon come when our youth will no longer require for their best development and higher education, European training.

Be it our bounden duty as physicians to disseminate to the masses proper instruction in the cardinal virtues of right living, and to demand from our government wise sanitary laws, both State and national, in the enforcement of which every house shall be builded and maintained as sanitarily safe as architecturally; rich and poor alike abundantly supplied with pure air and water, and have their habitation upon an uncontaminated soil."

NAPHTHOL--ITS MEDICINAL USE AND VALUE.

BY JOHN V. SHOEMAKER, A. M., M. D., PHYSICIAN TO THE PHILADELPHIA HOSPITAL FOR SKIN DISEASES, LECTURER AND INSTRUCTOR ON DISEASES OF THE SKIN IN THE SUMMER SCHOOL AND POST-GRADUATE COURSE OF JEFFERSON MEDICAL COLLEGE.

Read before the Philadelphia County Medical Society, Wednesday evening, October 17, 1883.]

Naphthol is one of the remedies of recent introduction, and of the two products of that name the B napthol is the one which was first used by Prof. Kaposi as a substitute for the tar preparations in skin diseases. It was thought by him as the essential and curative ingredient of tar while it was free from any objectionable features of the latter.

My attention was directed to this remedial agent by Dr. Justus Wolff, a chemist largely interested in the manufacture of coal tar products, who kindly furnished me a paper on the chemistry of this substance along with some novel properties which he had observed in it. As this paper, however, is too long for reproduction here in its entirety and besides is largely of chemical interest only, I will here give it briefly in abstract, as far as it will be necessary to acquaint us with the chemical character of its subject, as follows: Naphthol is a derivative of naphthaline, a hydrocarbon found in large quantities in coal-tar, belonging to the so-called aromatic group. In the fractional distillation of coal-tar various hydrocarbons are obtained at different degrees of heat. Thus at 80° C., Benzol distils over, between 80 and 110° C. Benzol and Toluol mixed, at 111° C., Toluol alone, from 111 to 136 Toluol and the different xylens mixed, from 136° C. to 142° C. Xylens only, then the Cumenes, Phenol and Cresols and at 218° C. Naphthaline which sublimes in colorless, transparent, brilliant crystalline plates possessed of a disagreeable pungent odor, the empyric formula of which is C_{10} H_8.

Naphthol is produced from this by a substitution of one of the hydrogens in naphthaline by one molecule of hydroxyl. = O. H.

According to the different positions of the hydrogen substituted in the naphthaline by the hydroxyl two different naphthols are obtained of which one is called α naphthol and the other the one we shall alone speak of hereafter is the B naphthol of the formula C_{10} H_7 O. H.

The naphthols demonstrate the advantage of a knowledge of the relative and positive positions of substitution in order to understand the cause and constitution of the different offsprings from single or compound constitutions.

The method of producing naphthol is like the general process employed in effecting hydroxyl substitutions by first producing monosulphs, substitutions by means of strong sulphuric acid at certain temperatures and melting the monosulphonated compound with sodium hydrate, the ordinary dry caustic soda. In the case of naphthaline treated thus with sulphuric acid the naphthalen-monosulphonic acid is produced

according to the following formula: $C_{10} H_8 + S. O_4 H_2\ 2C_{10} H_7 S. O_3 H + H_2 O$. Which on being melted with sodium hydrate yields naphthaline hydroxyl or naphthol, as per formula herewith:

$C_{10} H_7 S. O_3 H + 2 (Na O H) = C_{10} H_7 S. O_3 Na + O H_2 + Na O H = C_{10} H_7 O H + S. O_3 Na_2 + O H_2$.

According to the different temperature employed in the sulphonation of the naphthaline, either α or B naphthol are derived by the last process. The naphthols thus produced are usually purified by distillation and brought in the market as crystalline masses of a reddish color and a disagreeable and pungent odor, as shown in the specimen herewith submitted.

The naphthol B crystallizes in scale-like clino-rhomboidic laminæ from watery solutions; whilst in a molten state it represents clino-rhomboidic prisms. It dissolves in 520 parts of water at 60° F., and in 75 parts of boiling water. It is readily soluble in alcohol, ether and chloroform. An aqueous solution is colored yellow by chloride of lime and by heating this solution yellow flakes separate. It melts at 122° C. (Shaeffer) but a mixture of both α and B naphthol melts at a lower temperature than either alone. Compounds with alkaline metals or ammonia, and alkaline earths are not stable and separate easily either by evaporation or in contact with carbonic acid.

The naphthols stand in the same relation to naphthaline as phenol to benzol and cresols to toluol. If one of the six hydrogens in benzol is substituted by hydroxyl, phenol is obtained, in the same way are cresols and naphthols formed. By this analogy of constitution of naphthols, phenol and cresols, the inference may easily be arrived at that they may prove alike in their disinfectant character as well; and in order to prove this, I undertook a series of experiments. Of course, the commercial naphthol for that purpose was out of question, and I experimented, therefore, first to obtain a naphthol free from odor. As the crude article contains as contaminations sulphur and sulphurous acid, the sublimates thereof will yield, besides the naphthol crystals, also sulphuretted hydrogen, thionaphtholes, carbolic and cresylic acid, thiophenols, and the like, to which ordinary naphthol owes its pungent and disagreeable odor. I avoided this all by passing a rapid current of steam through its aqueous solution, expelling thus all volatile by-products, and obtained naphthol thus in its greatest state of purity, in beautiful silver crystalline scales, as here submitted. This naphthol may again be sublimed, and obtained then in elegant white crystals, as here shown; but by the heat employed, more or less decomposition again takes place, and renders the product somewhat disagreeable and pungent.

In order to test the disinfectant and antiseptic properties of my inodorous naphthol, I added one part thereof in powder form to 480 parts of urine, which, at the expiration of six months, at a varying summer temperature, manifests no odor or signs of decomposition; while another of the same urine, without addition of naphthol, had a strong, putrid odor already, after standing for three days only. To this latter I added, after standing thus for eight days, some of my inodorous powdered naphthol in the above mentioned proportion, and in twenty-eight hours it had lost its putrid odor, and has kept thus up to the present writing, when no putrefaction or signs of it can he detected in either specimen. The same experiments I have made with meat immersed in a solution of naphthol in 520 parts of water, as well as in other experiments similarly conducted.

Experiments with the solutions of the compounds of naphthols with alkalies or alkaline earths, prove that these act very much less antiseptic than the solutions of pure naphthol soap containing 4–10 % of free naphthol, were found excellent and serviceable in removing odors of putrefaction or decomposition from hands or cloths. They are also very efficacious in destroying clothes or body lice, as naphthol is a very active parasiticide. If naphthol is evaporated by means of heat, the air in rooms contaminated in consequence of disease or otherwise, it will be found to be rapidly deodorized and rendered fresh and sweet without other odors, making it thus of the greatest value for sick rooms, hospital wards, dissecting rooms, etc.

As carbolic acid has many disadvantages, and is not the deodorant or antiseptic par excellence, the inodorous naphthol can certainly take its place in every respect. As naphthol has been described variously as poisonous and injurious to the animal economy, which by its composition and analogy was not apparent, I felt it my duty to experiment with it in regard to such, and commenced at once without hesitation by taking it internally. One part dissolved in 3,000 parts of water produced at first heartburn, a slight sensation in the right lumbar region, and some dizziness. Of that solution an equivalent amount was taken to represent a half grain.

These symptoms disappeared after continuing its use for some days, and while the urine showed, upon analysis, traces of naphthol and naphthol compounds, no albumen or blood could be detected therein.

The doses then were gradually increased to 4 grains per day for six days, and still no untoward symptoms were discovered, while the warmth in the stomach directly after taking was followed by increased appetite.

Dr. Schofield, of Albany, reports to me that upon my solicitation he has used it largely, at first experimentally, in the Albany Hospital, but that there it has now become a staple article, and is used almost entirely to the exclusion of other disinfectants and antiseptics. They use it there for all kinds of disinfection in wards, sick-rooms, for wounds, etc., and have abandoned carbolic acid in all but a few cases, and always with the greatest satisfaction and success. This for the paper of Dr. Wolff.

His experience, as well as that of Koposi and others, led me, some eight or nine months ago, to employ it both in private and hospital practice, and the success attained with it soon led me to further experiments. I found it to fully sustain the claim that Kaposi had made for it in scabies, psoriasis, and chromophytosis, as well as in some of the chronic forms of eczema, in which it not only allayed the

itching attendant thereto, but lessening the infiltration as well. In wounds and indolent ulcers I have found it a most useful detergent and deodorant, removing the fetor and establishing healthy action of the parts. Aqueous solutions containing half grain to the ounce I have used to great advantage as vaginal injections, especially in leucorrhœa and uterine carcinoma as well as in gonorrhœal affections both in male and female. In diphtheritic throat affections it made a most useful gargle, as well as to remove the fetor of catarrhal and other affections of the buccal cavity. Its greatest value, however, arose from its disinfectant action of the evacuation of fever patients and rooms containing them, while by its absence of odor it did not tend to produce inconvenience both to patient and attendants. Combined with powdered talcum or starch, or both, and dusted into the shoes or stockings of those affected with fœtid exhalations of the feet it acts most satisfactorily, and its effect is equally as good in the same affection involving the hands, axillary and inguinal regions. Combined with other ointments in the proportion of from 1 to 10 grains to the ounce, it not alone preserves the unguent from decomposition, but exercises also an antiseptic action to the parts and the exudation therefrom. A slight admixture to an experimental sample of lard has preserved the same in excellent condition throughout the hot summer months. In chronic psoriasis, particularly when there is great infiltration a 5 to 15 per cent. ointment has frequently been attended with good results. It has also been very effective in squamous and fissured eczema, used combined with lard or gelatin.

To test for myself its antiseptic properties in comparison to that of carbolic acid, I mixed two whites of an egg with equal weight of water, and took one-half of this mixture in one vial, adding one grain of crystallized carbolic acid, while to the other half in another vial I added one grain of Dr. Wolff's odorless naphthol. After the expiration of five days the carbolized albumen assumed a putrid odor, whereas the naphtholized part, though discolored by the naphthol, remains to this day, twenty days after the experiment, without odor. A quantity (about half a pound) of meat already commencing to putrify was also at the same date immersed in a saturated aqueous solution of naphthol, with the effect of arresting the putrefaction and preserving it for some time.

After using naphthol so long and successfully without any untoward occurrences, I read to my astonishment and alarm that Dr. A. Neisser in the *Centralblat fur die Medizinischen Wisdenshaften* 1881, No. 30, reported most extraordinary toxic effects obtained with naphthol and that also Kaposi reported having seen hæmaturia, ischuria, vomiting, unconsciousness and eclamptic attack attacks in a boy after the external application of naphthol. Also that Squire reports in the *British Medical Journal*, January 14, 1882, of it producing blisters and irritating the skin.

Dr. Piffard regards it as a dangerous remedy, and Prof. Rapon while he reports good results with it (*British Medical Journal*, p. 750) in scabies, prurigo, and eczema advises in prolonged cases simple ointment to be substituted every fourth week to avoid any possible risk of absorption.

Dr. Neisser stated that one gramme of a saturated solution (which in water would contain about 1-30 grain of naphthol) injected hypodermically in a dog produced hæmoglobinuria and shortly afterwards death. To verify these accounts and satisfy myself on the toxic effect of pure naphthol if any it possessed, I administered to one rabbit repeatedly in 24 hours 34 minnions of a saturated aqueous solution hypodermatically without any result either as to inconvenience to the animal, increase of his temperature, diminution of his appetite, or causing lethal effect. This method of treatment was pursued for five days, not less than four to five injections being made per day, and the result was still the same. Determined to obtain toxic effects with it and if possible to demonstrate its toxic action by a post mortem examination, another rabbit was fed at first every three hours with one grain pills of naphthol and subsequently with two and four grain pills at the same interval, but beyond increasing the appetite of the animal no special effects were apparent. In consideration of this, one of my assistants, Dr. Charles S. Means, and my student, Mr. F. C. Waterman, volunteered to take naphthol themselves internally, to test, if possible, its action upon the human organization. They commenced with one-quarter of a grain dose every two hours, their pulse, temperature and urine being subjected to the closest inspection both before and after. The second day they took half grain every two hours, the third one grain every three hours, the same on the fourth, while on the fifth and sixth they took two grains every three hours, and on the seventh five grains twice daily. The pulse and temperature did not appear to be affected by this, nor was at any time albumen or blood apparent in the urine. Though they experienced great warmth in the epigastric region after each dose, that passed away in a short time, but left them with slight vertigo, buzzing of the ears with all evidence of cerebral hyperæmia. The alvine evacuations were softened and of mushy consistence, changed to a clay color, and in one of the cases increased to diarrhœa.

Arriving at a resume of my experiments I must certainly proclaim the odorless naphthol which I had received from Dr. Wolf as not a toxic agent, and while I have found it a most useful remedial substance and a disinfectant and antiseptic of the greatest value, it does not in my experience confirm the dangerous influence exercised on the human organism as reported by the gentlemen above quoted, a fact for which I can only account by the greater purity of the material used by me, purified from the deleterious contaminations above enumerated by the process already described, which is not employed abroad, where yet naphthol is sold and used as reddish crystalline masses, with strong, pungent and disagreeable odor. That it is far superior to carbolic acid and other disinfectants and antiseptics I have no doubt, and I am informed that in price it is not alone cheaper than the former, but by its greater efficacy and smaller amount necessary it is certainly more advantageous, aside from its greatest recommendation of

being almost absolutely odorless. It must be borne in mind that all my remarks apply to odorless naphthol, only such as I have exhibited and that I consider that alone as safe for medicinal use.

NERVE-STRETCHING.

[A paper read in the meeting of the Tri-State Medical Society, September, 1883, by H. G. B. Wright, M.D., in behalf of Drs. Johnson and Wright, Olney, Ill.]

In the fall of 1882 we performed our first operation of nerve-stretching. The result was such a phenomenal success, that we became much interested in the operation as a therapeutic process. In order to determine the frequency and results of the operation within the limits of the Tri-State Medical Society, we mailed about two hundred circulars to physicians and surgeons practicing in Indiana, Illinois and Kentucky; a few of them went to Cincinnati, St. Louis, and Philadelphia.

The blanks were printed in such form as to enable physicians to fill in the data asked for with a minimum amount of labor. Of those sent outside the geographical limits of our Society, none were returned. Only five of the circulars were returned, and they contained the data of only twenty-two cases operated on by eight physicians. So far as we know, only two of these cases have been published in the medical journals. Since these circulars were sent to the active men of the States mentioned, and elicited reports from only eight physicians, we infer the operation has not been resorted to by many physicians in this part of the United States.

Of these twenty-two cases, eight were traumatic tetanus, eight sciatica, two paralysis, one locomotor ataxia, one an obscure central nervous disease, one a case of dysasthenia, and one pain following a crushing injury to left arm.

The operation was productive of good in only two of the eight cases of tetanus, one of these recovering, the other receiving decided benefit, but dying several days after the operation, apparently of paralysis of the heart. The cause of the tetanus in the case that recovered was a nail wound of the head, and the median, ulnar and internal cutaneous nerves were stretched four days after the receipt of the injury. In each of the eight cases of tetanus, the nerve or nerves of the affected limb were the ones subjected to the operation, and the cases were all acute, the longest time that had elapsed between the receipt of the injury and the date of the operation being four days, and the shortest seven hours, the average being about two days.

One of the two cases of partial paralysis was a sequel of spinal meningitis, and the operation was purely experimental, and received as such by the patient. The result of the operation in this case is put down as a slight improvement; the other was a case of paraplegia, with cramps in both legs so violent that the patient could not rest. The cramp was relieved in all the muscles except those supplied by the obturator. The patient still has great pain in his back during cold, rainy weather. Dr. Roswell Park, of Buffalo, N. Y., sent us the data of a case of dysæsthesia which had existed for fourteen years, in which he stretched the right sciatic nerve on the 21st of June, and the anterior crural on the 29th, without obtaining any beneficial results.

The case of locomotor ataxia was operated on by Dr. Fenger, of Chicago. It was of two years' standing prior to the operation. The pains were relieved, but the procedure was productive of no more positive good, and the patient died six weeks after.

The cases reported under the head of sciatica constitute a very interesting group because of the large per centum of cures. Those of adult years, those in the responsible period of life, are the persons upon whom sciatica so often fixes itself with painful tenacity, resisting through years the wisest and most considerate treatment. Any harmless procedure that will cure three out of five, or even one in five of such cases, certainly merits our consideration. Two of these eight cases of sciatica are reported as being due to pelvic cancer. The pains were lessened in one, and cured in the other, both patients dying, a few months after, from the effect of the cancer. One of the remaining six cases was relieved for thirteen days, after which there was a gradual return to the condition existing before the operation. This leaves five of the eight cases cured permanently by the operation of nerve stretching, after all other remedies had signally failed. Dr. C. A. Palmer, of Princeton, Ill., operated on one of these—a woman—in 1876, who had been suffering from sciatica for four years. The Doctor writes: "Patient had previously tried every kind of treatment at the hand of every and anybody, but with not only no relief, but positively grew worse all the time. At the date of the operation, on account of suffering, loss of sleep, loss of appetite, etc., she was almost a complete wreck." The operation produced a complete and permanent cure. Dr. Roswell Park, of Buffalo, N. Y., operated in June of this year on a man 26 years old who had had sciatica for five months and had been well treated by the drugs without relief. The nerve-stretching cured him at once, with no return, to date of report.

The case on which we operated was a laborer, of fine physique and previous good health, 45 years old. He was taken in the fall of 1874. During the following winter he could walk but little, but could sit in a chair without much pain. During the first fifteen months he was treated by intelligent physicians of Olney. At the hands of one of these he received sulphate of morphia hypodermically along the course of the nerve for forty consecutive days.

During the winter of 1876–'77, he was treated by intelligent physicians in Decatur, Illinois. In the spring of 1879 he went to St. Louis, and was there treated by means of chemical electricity. Insulated needles were thrust deeply into the thigh along the nerve, and these connected with the battery. He was never treated by quacks. He made a manly effort to regain his health by applying himself to the remedies directed for him by his physicians, but such means were productive of nothing more than temporary benefit, and often were labor lost.

When he came into our professional care, he was unable to walk except on crutches, and his pains were always made worse by efforts at locomotion. His

pain commenced at an uncertain point in the right hip, and extended along the lateral and posterior aspect of the limb to the dorsum of the corresponding foot. His suffering was often intense; at other times a mere feeling of formication; hygienic surroundings not good; skin clear and pale; tongue furred; appetite capricious, and he had constipation, alternating with diarrhœa. His sleep was much broken. We gave him citrate of iron in sherry wine, cascara sagrada, sulphate of morphia, iodide of potassium, strychnine, arsenic, etc. At our hands he received a large number of injections along the course of the affected nerve of from 20 to 60 minims of chloroform. From these he received decided relief, but it was evanescent. We also gave him deep injections of sulphuric ether, but with less benefit.

In November, 1881, we applied the white-hot iron over the course of the nerve, each application remaining long enough to destroy the skin, and the spots were immediately painted with strong carbolic acid. This process was again repeated in January, 1882, and again in March.

Each application was productive of good; after the third a complete cure was thought to have been effected. During April and May, 1882, he moved about without pain, but close confinement to the damp, ill-ventilated chamber of his sick wife and daughter impaired his general health, and he began to have pain along the course of the left sciatic nerve. He could map out the true course of this nerve through the guidance of his pain with as much accuracy as an accomplished anatomist. In June, of 1882, we applied the actual cautery to this limb but it did no good. In July we used flying blisters with no better results. In October, 1882, we anæsthetized our patient the fifth time and cut down upon the nerve just below its usual point of bifurcation in the lower third of the thigh. Having lifted it out of its bed in finding nothing abnormal about it we stretched it by pulling it from above downward and from below upward.

The force exerted was very considerable. The wound was dressed with carbolized oil. Active inflammation soon followed, and his temperature ran quite high. There was alarming constitutional disturbance attended by the formation of pus in different parts of the thigh and calf which burrowed extensively requiring several counter openings to secure its escape.

The inflammation was so great and involved so much of the limb that we were of the opinion it was due to other than the clean cut wound made to reach the nerve. From the moment of the operation to the present, eleven months, he has been absolutely free from sciatica. He has thrown away first one crutch than both of them and then his strong cane and now walks by the use of a slender stick, but he has a slight halt, due to the adhesive inflammation following the operation. For several months he has been earning good wages at manual labor.

After suffering eight and a half years and resorting with confiding and heroic perseverance to the treatment of good physicians he has nerve-stretching to thank for his restoration.

The prominent facts worthy of special consideration, as shown by the data of these twenty-two cases, may be expressed in a few sentences.

1. The operation was productive of good in only two of the fourteen acute cases, while it was beneficial to a greater or less degree in seven of the eight chronic cases.

2. The nerves of the upper extremities were stretched in the acute cases and those of lower extremities in the chronic.

3. The procedure had no effect on the case of dysæsthesia of fourteen years standing, this being the only one of the chronic cases on which the operation was a complete failure, the result of the case of sciatica following spinal meningitis being set down as only a slight improvement.

4. The five chronic cases reported cured were sciatica.

5. No unpleasant results are reported as having followed the operation, except those in the case operated on by ourselves.

These facts are certainly reassuring and take away from the operation the phantom of danger that might cause many an anxious physician to withhold the knife and allow his patient to suffer through months, and even years, and it adds another justifiable resource to the many with which we have been fighting neuralgias, especially of the sciatic nerves.

REPORT ON LAWS REGULATING THE PRACTICE OF MEDICINE IN THE UNITED STATES AND CANADA.

BY RICHARD J. DUNGLISON, M.D., AND HENRY O. MARCY, M.D.

[Report of a Committee read before the American Academy of Medicine at New York, October 10, 1883.

The progress made in the legislative restriction of medical practice in the United States since your Committee was appointed, three years ago, to report upon the subject, has been both notable and salutary. At that time the propriety of establishing such laws was under active discussion, and weak enactments, temporizing in character and but partially effective in their action, were evoked from tardy and timorous legislators in several of the States of this country, as compromises between a sense of the necessity of doing something to protect the health of their constituents and a consciousness that the practitioners and supporters of quackery and of irregular methods of medical treatment were among the influential voters whose active opposition might jeopardize their re-election. It was also found to be impossible, in a few of the States, to establish regulations for the practice of medicine which would be shaped to the wishes, principles or prejudices of those members of the Legislatures who believed that they themselves were occasionally benefitted by prescriptions that were not wholly scientific in their character, or by remedies that had acquired their reputation by extensive advertising of their supposed merits and efficacy. The legislation of the last year or two, however, seems tending to greater stringency, and to more ad-

equate provision for the regulation of medical practice. Several States which had hitherto but feeble legal enactments, or possibly none at all, have, since our last report, adopted measures that will probably be found to be effective in their working and conducive to the public welfare. The excellent laws now in force, in West Virginia and Illinois have been taken as models, and although it has been found impossible to imitate them exactly, on account of local obstacles and local prejudices, the wedge has been entered, and some good results must inevitably attend the enforcement of the law. A letter recently received from Dr. Millard, the Secretary of the State Board of Minnesota, a State which has adopted restrictive enactments since the last annual report of your Committee, summarizes the general aspects of the best of these laws; and we may quote his remark upon their provisions as particularly appropriate in this connection; especially as he has given the subject of medical legislation close study and attention:

"I think," says Dr. Millard, "The law or 'Acts' now in force in West Virginia, Illinois, Minnesota and Missouri, the best, by far, extant in any of the States. These four States are governed by virtually the same law, and have a constituency of at least 15,000 physicians. Each act gives the Board the power of deciding the diplomas of what schools they shall recognize, and of revoking the certificate of any practitioner for unprofessional conduct; also the power to grant licenses to non-graduates by passing the necessary examination to test their fitness. You will observe that the main features of the law of these four States make the Board the censors of the different medical schools, as well as of the professional conduct of those practicing within the jurisdiction of the different Boards. It is claimed by the enemies of this act that it constitutes a 'medical autocracy' of the Board, and that it may use its power very unjustly. There is no doubt that, if the act is administered by unfair men, this criticism is true. It is, however, noticeable that outside of a few '*commercial*' medical schools, the law gives the greatest satisfaction, and I have not heard a whisper of complaint. The profession in general and a few of our leading medical institutions recognize that this country is flooded with incompetent medical men. That the time has arrived to cry, halt! all will assert, but as to the means of bringing about the halt there is a great difference of opinion. That it will not be brought about by the colleges themselves the profession is satisfied, after the last ten years' agitation of the subject, and the example set by Bellevue and some others. In appealing to legislatures to regulate this evil, I think the correct law should compel *all parties* to submit to an examination before practicing in the State. Such legislation is, however, impracticable now, and next to this I think the acts of the States I have mentioned the best."

Whatever the character of a legislative enactment may be, the benefits to flow from it will necessarily depend upon the manner in which it may be enforced. All the States may not be so fortunate as those of West Virginia and Illinois, in the possession of executive officers, in the possession of their secretaries (Drs. James E. Reeves and John H. Rauch), who are at once vigorous, keen, energetic and alive to the public interests involved in a faithful execution of their respective trusts. As stated in our previous report, West Virginia is, we believe, the only State which has a Board whose medical members are all of one professional faith. The medical profession in every State, however, recognizes the fact that these laws are designed, not for their own protection, but for the good to the community at large which flows from properly regulated medical practice. Indeed, as has recently been remarked in the editorial columns of a prominent medical serial,[1] "registration laws primarily intended for the protection of the profession, seem particularly liable to fall short of their intended objects, not so much because of defective construction, as of unfaithful interpretation; indeed, unless definite and comprehensive in expression, and fully sustained by public opinion, they may be made in practice to sanction and perpetuate the very evils they were intended to correct. It has been more than once asserted, by those fully qualified to judge, that in the neighboring State of New York the medical profession has really lost, by the Registration Act, more than it has gained. At the last meeting of the State Society of New York, it was mentioned as a fact, by one of the members, that an Indian medicine-man had driven into Rochester, in war-paint and feathers, though engaged in the peaceful art of selling patent medicine, and, having gone to the Prothonotary's office and paid the registration fee, he had obtained a certificate as a physician, with full authority to practice under the law. Much disappointment has been expressed by physicians in Pennsylvania, as well as in New York, at the operation of the Registration act, it being claimed that the practical result is that, instead of elevating the profession above irregulars and charlatans, it has degraded the regular practitioner to the level of any one who can register under the act, however unworthy he may be to be in the ranks of the medical profession. It seems more than absurd that a physician may commit a crime that will render him in the eyes of the law unworthy to exercise the franchise of a freeman at the polls, and yet no bar exist to his continuing in practice, and no means are provided to annul or deprive him of the diploma he has dishonored."

The Mississippi State law, which was adopted in 1882, is stated, by an earnest observer in that section of the country,[2] to be on a par with that of Illinois, in its efficiency and practical working, and is said to have accomplished already all that its most sanguine friends could have expected. To quote his own language, "all practitioners in the State, as far as I am aware, of every grade, have cheerfully complied with all its requirements. * * The pile doctors, down to the Indian doctor tramping around with his banjo and his calico gown, have given us a clear field. Their places are vacant, and their voice is heard no more in the land. Thus, already, in one season,

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[1] *Philadelphia Medical Times*, July 14, 1883.

[2] Dr. J. M. Taylor, *Miss. Valley Med. Monthly*, Feb., 1883.

thousands of dollars have been saved to the people of the State, to say nothing of other benefits."

As we must necessarily refer frequently to the conspicuous labors of the Illinois State Board, in any report intended to illustrate the operation of State laws for the relief of the public from the operations of unlicensed or legally unrecognized practitioners of medicine, in its various departments, we must briefly allude, at this moment, to its numerous refusals to extend its privileges to unworthy applicants for its recognition, and at the same time, signify our appreciation of its efforts in a direction well worthy of our recognition as Fellows of the American Academy of Medicine, the attempt to secure a common Examining Board on preliminary education for all the medical schools of Chicago. To still further perfect its work, an effort was recently made in that State to secure the passage of a law which would rid the community of advertising and lecturing quacks.

A direct service to the medical profession throughout the country is being at this very moment executed by this Board, and especially by its very efficient and energetic Secretary, Dr. John H. Rauch, in the publication of an elaborate pamphlet on "Medical Education and the Regulation of the Practice of Medicine in the United States and Canada," in which are embodied at length the details of all the laws now in force in the various States and Territories of the Union, and in the Provinces of the Dominion of Canada. Each is herein represented in its present attitude, up to the very latest possible date of practicable information, and in numerous instances the opinions of official authorities as to the efficiency of the law are appended. Not only is the present phase of medical legislation thus made apparent at a glance, but medical education is portrayed, in the brief analysis of the course of instruction, requirements, etc., of each medical school recognized by the Illinois State Board, including, of course, all the other colleges of the country which have a reputable standing through their chartered existence in each State. At the meeting of the Council of the American Academy of Medicine in Philadelphia, in October last, the importance of such a work was so seriously recognized, as an outcome of the slight efforts in this direction made by your committee in their annual reports, that the Secretary of the Academy was instructed to approach some of the leading publishing houses with the view of giving to the profession, as one of the labors of the Academy, a work that would embody all the laws regulating medical practice as they existed at that time. Fortunately, an enterprising public body, the State Board of Health of Illinois, and its enthusiastic and valued Secretary, have now done what the publishers could not regard as a safe commercial venture, and the profession and public will doubtless be more liberally benefited by that more general mode of distribution. The good work thus executed by the Illinois Board will be the accepted authority for the profession on all points relative to medical education and practice in the United States.

It is not contemplated by your committee to enter into the details of the new laws enacted since the presentation of their last annual report. It may be briefly stated that the following States and Territories are now in the possession of laws, of various degrees of force and effectiveness, regulating the practice of medicine: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Vermont, Virginia and Wyoming. Canada has laws in operation in the provinces of Manitoba, New Brunswick, Nova Scotia, Ontario and Quebec. The States and Territories in which legislation has been established since the last annual report of this committee are Delaware, passed April 19, 1883; Michigan, which went into effect September 7, 1883; Minnesota, approved March 6, 1883; and Missouri, in effect from July, 1883. All of these recent enactments have elements to be commended, and if strictly enforced will undoubtedly command success in their execution. Of the States above mentioned in the general list, a few have weak and temporizing provisions. Pennsylvania still lags behind her sister States; her legislature is content, for the present, with having adopted a simple registration law, which may have, and doubtless has, already accomplished a certain amount of good, and this has been accepted as the only present attainable and possible substitute for the stringent and restrictive measures which the profession and public so urgently desire.

Of the peculiarities of construction or operation of some of the laws now in force much might be written in commendation or criticism; but the limits of this report render their recapitulation wholly impracticable. Sufficient is it to point out a few of these, in elucidation. In Alabama, for example, the diplomas of medical colleges confer no right to practice medicine in that State; the applicant must be actually examined by a board appointed for that purpose. In Arizona and Pennsylvania and in Washington Territory, the law is simply for purposes of registration; in Arkansas a bill providing that all practitioners should be graduates of reputable medical colleges failed, this year, to pass both houses of the Legislature, and county boards of medical examiners, appointed by county judges, who may not be competent to decide as to the professional qnalifications of their appointees, still continue to give certificates to applicants for permission to practice medicine in that State. Connecticut's very brief law is mainly intended for the punishment of itinerants. In Kentucky the law is a dead letler except in a few counties, and in Texas and Nebraska it is weak and ineffective.

Our Associate Fellow, Dr. Piffard, considers the New York law a good one, but that it has one important defect, in that a perjury in registering is only punishable as a misdemeanor, and not as a felony. Oregon has had a bill before the Legislature every year for ten years past, but it has not yet succeeded in attaining so desirable a consummation. In Tennessee, which has no law of this kind, the practice of medicine is said to be free to all; accord-

ing to the authority of the Secretary of the State Board of Health, "Indians, Negroes, confidence men, and all that ilk, ply their trade, with no restrictions whatever. Any man who claims to be a doctor *is* one, hence druggists who do not know enough to make a living turn out as doctors in full practice before you know it. A farmer boy, too lazy to plow, reads an old work on practice, or 'Every Man His Own Doctor,' invests six dollars in drugs, and is a physician; and being a 'regular,' we all consult with him. Our legislators will not touch, and our doctors are too timid to press, the subject, and so we languish in the old paths."

It may well be asked by us, as a committee watchful of the progress of the times, whether, in States like this, which have imposed no restrictions upon the unlimited and unbridled practice of medicine, the experience of nearly four centuries has seen any marked change from the days of King Henry VIII. to the present hour[1]; for we read in the preamble of an Act, passed in England in the year 1511, looking to the regulation of the practice of physic and surgery, that its enactment was rendered necessary by the fact that "the science and cunning of physick and surgery is daily, within this realm, exercised by a great multitude of ignorant persons, of whom the great part have no manner of insight in the same; some also can read no letters in the book, so far forth that common artificers, as smiths, weavers, and women, boldly and accustomably take upon them great cures and things of great difficulty, in which they * * apply such medicine as be very noxious and nothing meet therefore, to the high displeasure of God, great infamy to the faculty, and the grievous hurt, damage, and destruction of many of the king's liege people."

Utah has shown her interest in medical legislation only by that provision of her penal code which punishes physicians who are drunk, and has been content with this measure of legislative protection of the people of that section of the country. A correspondent in Salt Lake City[2] writes that "the inference is, that during the little time he is sober he will not do much harm. As for the medical fraternity proper, I do not think any of them care for any law regulating medicine. I believe they are advocates of the doctrine of the 'survival of the fittest.'" Wisconsin might be placed in the list of those having a law to regulate the practice of medicine, but the title indicates that it is simply "An Act to prevent Quacks from Deceiving the People by assuming a Professional Title," and not really a law that may be classed in the same category as those mentioned previously.

In a letter recently received from Dr. Rauch, Secretary of the Illinois State Board of Health, the following interesting remarks are made by him:

"The following States may be said to have *good* laws, viz: North Carolina, Alabama, West Virginia, Illinois, Missouri, Minnesota, New Mexico, Wyoming Territory, Mississippi, Louisiana.

"Alabama requires *all* persons, both those holding diplomas and those having none, to appear before the State or county boards.

"North Carolina requires about the same, but the penalty for violation of the law is inadequate, and there is some complaint against it for that reason.

"The Mississippi law is new, and can not be well judged yet.

"After this year, graduates of all colleges not complying with the requirements of this Board will be examined by the Board before being admitted to practice."

Such are the main points of interest connected with the progress of legislation in this country, which your committee have deemed it advisable to report. The facts they stated, in as comprehensive and condensed a manner as they have thought possible in their efforts to illustrate the progress of legal restrictions upon the practice of medicine, warrant them in expressing the view that commendable progress is being effected in this direction, and to entertain the belief that bright anticipation may be indulged for the future establishment of a healthy public sentiment that will in time protect the people themselves from the evils of irregular practice which they have blindly tolerated for so long a series years.

[1] W. T. Bly. "Early English Medical and Surgical Legislation." *New York Medical Record*, September 1st, 1883.

[2] Dr. H. J. Richards. Report of Illinois State Board.

MEDICAL PROGRESS.

ON A PECULIAR DISEASE OF HOT CLIMATES.—(*Psilosis Linguæ—Psilosis Mucosæ Intestini*). Under this heading Dr. George Thin (*Practitioner*, September) describes a disease, to which the local name of "Sprew" is given, which name is likely to mislead. Webster defines sprew as equivalent to thrush. Dr. Thin proposes the term psilosis as expressive of a constant feature of the complaint, the bareness or rawness of the mucous membrane. The disease prevails among the foreign residents in many of the Chinese ports, and the patient carries it home with him; or, being quite well during the course of the summer months, experience a recurrence of the disease when the weather becomes suddenly damp and cold.

Its onset is marked by a morning diarrhœa of stools that consist of a watery, thin, straw-colored fluid, which causes slight debility, that passes off as the day wears on. This may continue for months, or one or two years, without producing marked change. If the patient is delicate, after a few months a marked decrease of strength is observed, and he may become very ill. If he is naturally strong, it may last even so long as a year without any marked diminution of strength, but invariably sooner or later, if the disease continues, a condition of great debility ensues. In what may be termed the second stage of the disease dyspeptic symptoms appear, soreness of the mouth, pain in the stomach after food, painful, flatulent distention, and sometimes soreness in the rectum. At the same time there is more or less nausea, loss of appetite, and prostration. In the third, what may be called the fatal stage, which may last for a considerable time, the symptoms of marasmus are marked.

During the whole course of the disease the tongue

is more or less affected, showing an unusual sensitiveness to hot fluids or acid substances, soreness over the whole mucous membrane of the mouth, localized pain in one or two points of the tongue. During exacerbations the tongue is seen to be redder than usual, and raw looking. More advanced, it may be smooth and polished, or rough and cracked, at times covered with aphthous deposits.

Of the pathology, little is known. It evidently consists in a defect of the formative power of the epithelium of the mucous membrane of the tongue and intestine—sometimes of one, sometimes of the other, for in some cases the prominent symptoms are intestinal, and sometimes of both. It occurs only in persons who have been in malarial countries, but it is not certain that it is due to malaria. In the treatment, diet is all important, an avoidance of vegetables, and hard, indigestible food of all kinds. Milk diet has succeeded best with Dr. Thin. Astringents and opiates are useless—produce a secretion of bile through the use of rhubarb and epsom salts, and give small quantities of quinine and bitters. The local treatment of the tongue was not satisfactory. Caustic solutions were of no avail. Boracic acid and glycerine seemed to relieve somewhat. Dr. Thin forbade the use of tobacco and alcoholic liquors; but in two patients who recovered, the use of a little alcohol in a very diluted form seemed to be beneficial.

On the Substitution of the Hypogastric Section for the Different Methods of Perineal Section as the General Method in Cystotomy. —Prof. Villeneuve, M.D., discusses this question at length in an article in the *Revue de Chirurgie*, Sept. 10, and comes to the following conclusions:

1st. The hypogastric section, which, up to the present time, has only been employed as an exceptional method, seems destined to become the general, but not exclusive, method of cystotomy.

2nd. It should be practiced with the aid of the most recent perfected improvements applied to operative manipulation; as ballooning of the rectum (this is an awkward word, and as we have adopted such terms as ballottement, why not say ballonnement to express the dilatation of cavities through the distension of rubber balloons—or what is similar to them, in other words, the use of the colpeurynter); vesical injections; draining of the peritoneal cul-de-sac by syphon-tubes; and antiseptic precautions and dressings.

3rd. The suture of the bladder must at present be discarded. But it remains as an ideal to be followed up, and if it can be accomplished, it would at once, by immediate union, place the superiority of the hypogastric section as beyond all question.

4th. The hypogastric section remains, as formerly, a necessary method in cases of very large stones, of intolerant bladder, and of impermeable or constricted urethra or vagina.

5th. It is presumable that it will become the method by preference in old persons, and in adult men in certain cases where lithotrity is not practicable, and which have up to the present time been treated by the different perineal methods.

6th. In male children, it will probably be found at least to be equal in success to the perineal section. But the latter has been so successful for such a length of time as to make this of comparatively little importance.

7th. In little girls, and the young girl at puberty, the hypogastric section should be the one selected.

8th. In women who are no longer virgins, the question of a choice between the hypogastric section and the vaginal section remains a mooted question, and requires further investigation.

9th. An inflammatory affection of the uterus, a notable deformation of the bladder through uterine trouble, and especially cystocele, should influence the selection of the hypogastric section.

10th. The hypogastric section in adult females should be preceded by dilatation of the urethra.

11th. Constitutional affections and diatheses do not constitute any special indications for a choice in the operation; and the same may be said as regards the wounding of this or that branch of the sympathetic plexus.

The Jubilee of Dr. Friedrich Herrmann. — The *St. Petersberger Medicinische Wochenschrift*, in its issue of Sept. 10 (22), devotes its first page and a part of its contents to congratulations to, and a sketch of, Dr. Friedrich Herrmann, who, it says, "yesterday 50 years ago entered the service of the Obuchow Hospital as a supernumerary; yesterday his congratulators assembled for his jubilee, that he had for so long led an honorable career, and that, after so long a service, he was still able to perform his duties with undiminished power. Fifty years of faithful service and severe, self-sacrificing work in the same place—in these few words lie much. A man who can be so spoken of must be a man indeed, and his name can only be spoken with honor and respect. We hasten to attend the jubilee of the highly honored and highly deserving veteran, carrying with us also our sincere and respectful wishes for his happiness, and would wish that there were yet many among us who were capable of persevering at their posts of difficulty and of doing as Herrmann persevered and what Hermann has done."

In the sketch of Dr. Herrmann which follows, it appears that he was born at St. Petersburg, March 22, 1811, of German parentage, and after becoming an apothecary, he graduated as a physician in the Medico-Chirurgical Academy, June 24, 1833. On Sept. 9, 1833, he entered the Obuchow Hospital as a supernumerary, becoming Physician-in-chief in 1862. Besides his position in the hospital, he has received recognition from his Government in the shape of various orders, crosses and titles. He published his studies of epidemic cerebro-spinal meningitis in this journal (*St. Pet. Med. Wochenschr.*, Vol X.), and has written upon remittent fever, the abuse of spirituous liquors, and the diagnosis of anthrax intestinalis.

Trichina in Germany.—We find in the *Gazette Hebdomadaire des Sciences Médicales de Montpellier*, Sept. 15, an article taken from the *Archives Veter.* on this subject, which shows the frequency of the

prevalence of trichina in the north of Germany, and it questions the right of Germany to accuse America of furnishing so much trichina pork, as the trichina pork of America has at least one advantage, that of rarely communicating the parasitic infection, as, by the process followed in preparing the pork in Chicago and Cincinnati, the trichinæ are killed, which is not the case in the pork considered eatable in the north of Germany, which, according to the custom of the country, is but imperfectly cooked. It would seem, from the recent discussions at the German Bundersrath, that the commissary of the imperial government could cite but three cases of trichinous infection resulting in Germany from the consumption of American pork; that of Rostock, 1871; Bréme, 1872; and that of Dusseldorf, 1881; while he could cite by thousands the cases of infection caused during that period by indigenous trichinous pork, and nearly by hundreds the cases of death which that infection had caused.

The following from the official reports published by Dr. Eulenberg gives the number of cases of trichinosis observed during six years in Prussia:

Year.	Carcasses Examined	Cases of Trichina.
1876	1,728,505	800
1877	2,857,272	701
1878	2,524.105	1,222
1879	3,213,155	1,975
1880	3,342,303	2,284
1881	3,118,780	1,695

Making 8,677 cases of trichina out of a total 16,782,-210, or one case in 1,934.

To recognize these cases of trichina it required an army of inspectors with the microscope, which numbering 12,000 in 1876 increased to 18,581 in 1881. In spite of of these precautions the number of published cases of trichinosis in the human subject has been quite considerable. There were in 1876 358 cases; 1877, 356; 1878, 488; 1879, 400 and over; 1880, 200; 1881, 238. That is to say 2,040 in six years, being 340 a year, out of which there were 84 cases of death, or 14 a year.

There follows in this article an account of the proportion of the American pork affected with trichina as shown on inspection in various localities in Germany, but as it is not presentéd in a very ready form for tabulation we omit it.

GENERAL GLANDULAR HYPERTROPHY.—Prof. Dr. Castiaux (*Bulletin Médical du Nord*, July) reports a case of this kind occurring in a woman 58 years of age, of vigorous constitution and with no previous history which would throw any light on the cause of the disease. She entered the hospital suffering from glandular enlargements on the left side of the neck, which had for the past four months gradually become more pronounced and troublesome. On examination, the superficial and deep lymphatic glands on the left side of the neck were found to be enlarged and hardened, passing under the clavicle and into the corresponding axillary space. They varied in size from a walnut to a hen's-egg, pushing the larynx to the right and compressing the blood-vessels. On the right side of the neck above the clavicle were a few affected glands — none in the right axilla; nor were any of the inguinal glands affected. The patient had an enormous embonpoint. This condition produced marked dyspnœa, alteration of voice and numbness of the left arm. Treatment generally by potassium iodide, locally by injections of iodine tincture, had no effect. The tumors increasing markedly in size and the symptoms becoming more exaggerated, an operation for the enucleation of these glands was performed without difficulty, but laying bare the internal jugular vein; it was followed by a marked amelioration of the symptoms. In nine days after the operation hæmorrhages set in, which became so serious and persistent that an attempt was made to ligate laterally the internal jugular vein. The attempt succeeded, but with great loss of blood, and was soon followed by death. The *post-mortem* showed an ulceration into the vein two and a half centimeters long. All the glands on the left side of the neck were enlarged, from the base of the cranium down; the whole of the arch of the aorta was compressed by glands. The left pneumogastric was compressed throughout its length, the right was free in the thorax, both was surrounded by a large glandular mass. The superior portion of the right bronchus was perforated by a gland which had destroyed its wall and projected into its cavity. The pericardium was double and adhered closely to the morbid mass of glands. One gland, of the size of a hen's-egg, had pressed through the outer envelope, projecting into its cavity, but covered by the serous layer. The left trachial plexus and axillary vessels were surrounded by glands; the right were free. The posterior surface of the sternum showed large glands firmly attached. In the pleural cavities, particularly the left, along the intercostal spaces were little tumors adhered to the pleura. The lungs, *on their surfaces*, showed white-projecting nodosities adherent to the pleura. The vertebral glands were all affected, forming a chain which bifurcated and followed the iliac vessels to the crural rings where they were checked. The inferior vena cava was compressed. The mesenteric glands were also hypertrophied. The liver was very large, with little gray spaces on its surface, quite circular in form and in places easily enucleated by the handle of the scalpel, in others blending with the healthy liver tissue into which it sent small prolongations. The spleen was twice the normal size with firm tissue, containing little gray soft tumors of the size of a small pea. The bodies of the vertebræ throughout were of a spongy texture, infiltrated with a gray substance. The cervical glands were hard, the abdominal glands were soft. It is not necessary here to give the histological appearances, although they were very interesting. It was evident to the reporter that it was a case of lymphadenoma and that commencing at the neck it invaded successively the thorax and abdomen. That the same tissue as found in the glands, reproduced itself in the spleen, the liver, the pleura, and even in bone. One further point, which is not mentioned above, is of interest: that in the operation for ligating the internal jugular vein, it remained open for nearly half an hour without the entrance of air; nothing opposed that entrance, but neither the veins nor right side of the heart contained the slightest trace of its presence.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, NOVEMBER 3, 1883.

SPECIALTIES, AND THEIR ETHICAL RELATIONS.—Twice, within a short time, has the editor of this journal been applied to for information (and many other times in years past) in regard to the questions, "*How far, and in what way,* can those members of the profession who are desirous of pursuing a special practice, or, in other words, limiting their practice to certain diseases or the affections of certain organs, make known their position by cards or advertisements without violating the National Code of Ethics?" The highly intelligent sources from which these inquiries have come, render it probable that only a small number in the profession know the answers that have been given at different times by direct action of the American Medical Association. It is well known that the National Code of Ethics contains no allusion to *specialties,* in the sense that the word is now used, but simply declares it to be "derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; etc., etc." It declares: "These are the ordinary practices of empirics, and are highly reprehensible in a regular physician."

Admitting that these provisions plainly prohibited all classes of regular and honorable practitioners from advertising either in the public prints or by private cards in such a way as to call the attention of those laboring under particular diseases; the rapid development of specialties soon led those following them to assume special titles not conferred by any educational institution, and not only put the same on their cards, but, in addition, to use such expressions as "special attention" given to this or that disease or class of diseases.

It was claimed by many of the specialists that the daily use of cards containing such titles as Ophthalmologist—Otologist—Gynæcologist, and such expressions as "Special attention given to Diseases of the Eye and Ear," or to "Diseases of Women," etc., and the publication of such cards in strictly professional journals, or the sending of them in envelopes to members of the profession, was not "inviting the attention of individuals affected with particular diseases," and consequently not a violation of the Code. And individuals of this class managed to discuss the subject and urge these views, during some part of almost every annual meeting of the American Medical Association prior to 1868. At the meeting of that year, Dr. E. L. Howard, of Baltimore, offered the following resolution:

"*Resolved,* That a committee of three be appointed, to report at the next annual meeting on the subject of specialties in medicine, and on the propriety of specialists advertising."

"After much debate, the previous question was called by Dr. Bibbins, of New York, and sustained, and the resolution was adopted by a large majority. The President appointed as the committee, Drs. E. Lloyd Howard, Frank Donaldson, and Christopher Johnson, of Maryland." (See Transactions of Am. Med. Association, Vol. 19, p. 35.) At the next annual meeting, held in May, 1869, this committee made a report, which closed with the three first resolutions given below. The fourth resolution was moved as an addition by Dr. L. P. Yandell, Jr., of Louisville.

"*Resolved,* That this Association recognizes specialties as proper and legitimate fields of practice.

"*Resolved,* That specialists shall be governed by the same rules of professional etiquette as have been laid down for general practitioners.

"*Resolved,* That it shall not he proper for specialists publicly to advertise themselves such, or to assume any title not specially granted by a regularly chartered college.

"*Resolved,* That private handbills addressed to members of the medical profession, or by cards in medical journals, calling the attention of professional brethen to themselves as specialists, be declared in violation of the Code of Ethics of the American Medical Association." (*Vide* Transactions, vol. xx, p. 28.)

These four resolutions were deliberately adopted by a vote of the Association and have remained unchanged since.

They constitute no part of the constitution, by-laws, or code of ethics of the Association; but are to be regarded as indicating the views of that organization concerning the questions involved.

Some of the restless ones were not satisfied, however, and at the annual meeting of the Association in 1873, a resolution was adopted requesting the members of the Judicial Council as a committee to inquire into the expediency of a general revision of the Code of Ethics, and report at the next annual meeting. In obedience to this request the Committee, consisting of members of the Judicial Council, gave the subject full consideration and reported at the meeting in 1874, and the report was unanimously adopted by vote of the Association. That part of the report relating to the subject now under consideration is in the following words:[1]

"The Code of Ethics very properly makes no mention of specialties or specialists, but presents plainly the rules necessary for the maintenance of professional character as applicable to all. But we are asked how, then, can those who wish to pursue a special practice make known their position to their brethren and the public? We answer that the title of Doctor of Medicine covers the whole field of practice, and whoever is entitled to that appellation has the right to occupy the *whole* or any part of the field, as he pleases. The acceptance of this honorable title is presumptive evidence to the community that the man accepting it is ready to attend practically to any and all duties which it implies. As all special practice is simply a self-imposed limitation of the duties implied in the general title of doctor, it should be indicated, not by special or qualifying titles, such as *oculist*, *gynæcologist*, etc., nor by any positive setting forth of special qualifications, but by a simple, honest notice appended to the ordinary card of the general practitioner, saying, 'Practice limited to the diseases of the eye and ear,' or 'to diseases peculiar to women,' or 'to midwifery exclusively,' as the case may be. Such a simple notice of limitation, if truthfully made, would involve no other principle than the notice of the general practitioner that he limits his attention to professional business within certain hours of the day. Neither could it be regarded as a claim to special or superior qualifications. To give the specialist any privileges beyond this, would be to invest him with a special advantage inconsistent with the equality of rights and duties pertaining to the profession."

We are not aware that the Association has taken any action in relation to the Ethical Status of Specialties since the adoption of the report of which the above quotation is a part. Taken in connection with the resolutions previously quoted, each member of the profession can see plainly just how far, and in what way, he can make known, both to the public and to his professional brethren, the fact that he desires to *limit* his practice to any particular part of the general domain of medicine and surgery.

[1] See Transactions of Am. Med. Association, Vol. 25, pp. 30-31.

EXPLANATION: The last three numbers of the JOURNAL have been printed on the day of their date. But owing to the amount and quality of ink necessarily used in giving the numerous illustrations in the interesting paper of Dr. Keyt a fair impression, it was found necessary to delay folding the sheets a few days, and consequently made that number (the 15th) late in reaching its readers.

DOMESTIC CORRESPONDENCE.

PHILADELPHIA LETTER.

OPENING OF THE MEDICAL COLLEGES—OUR DISTINGUISHED VISITORS—THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

PHILADELPHIA, Pa., October 23, 1883.

On October 1st, about noon, Prof. Alfred Stille delivered the general introductory lecture to the one hundred and eighteenth course of lectures in the Medical Department of the University of Pennsylvania. The speaker was warmly welcomed by a large gathering of eminent members of the profession, many alumni and students, who were amply rewarded by a most excellent address, in which Dr. Stille dwelt to some extent upon higher medical education. In the evening of the same day probably the largest audience that has ever assembled in the arena of Jefferson Medical College Hospital greeted Prof. Theophilus Parvin, who delivered the inaugural address at the opening of the fifty-ninth annual course of lectures of the college. Prof. Parvin spoke in an able and scholarly manner on the "Genius of Medicine." At the conclusion of the address the class, through their chairman, John V. Sheppey, presented Dr. Parvin with a beautiful floral emblem, in which was set a pair of Wallace's forceps. Prof. Parvin, in accepting the gift, which was symbolical of the good feelings of the class towards their new teacher, responded in his usual happy and appropriate vein.

The Medico-Chirurgical College began also on the first of October their third course of lectures, with an introductory by Dr. Frank O. Nagle. The Philadelphia Polyclinic and College for Graduates in Medicine began on the same day their fall sessions. The same corps of teachers, with the exception of Dr. R. J. Levis, who has resigned, will continue to give instruction to physicians from October until July.

Sir William MacCormack, during his short stay in Philadelphia, was received and honored by our most prominent surgeons. The attentions that this distinguished surgeon received, although of a private nature, were as cordial as that which was tendered to England's Chief Justice, Lord Coleridge. This eminent jurist was especially honored by the trustees of

the University of Pennsylvania, with a dinner in the University hall, at which were present not only our leading scientists and professional men, but likewise our most prominent citizens. The presiding officer, Prof. William Pepper, in presenting the distinguished guest, did so in such a masterly manner as to reflect the greatest credit upon the University and his profession.

At a conversational meeting of the Philadelphia County medical Society, held on Wednesday, October 17, Dr. Charles Herman Thomas reported "Three Cases of Downward Displacement of the Transverse Colon, including account of Autopsies." The cases showing the forms of displacement were illustrated by diagrams. Dr. Thomas stated that during the illness of the patients the conditions referred to were not in any instance recognized. After recounting the history of each case, the speaker added in conclusion that downward displacement of the transverse colon had been the immediate cause of death in them all, and that while the condition was rare, but few if any cases were recorded of this condition. Dr. Albert Smith, who was in consultation with Dr. Thomas in one of the cases, referred to the fact that they were unable to make out accurately a diagnosis, and thought that could such cases be recognized, the elevation of the hips might cause the colon by gravity to return to its proper place. Prof. Robert Bartholow said that downward displacement of the transverse colon should be divided into congenital and acquired. He had seen cases of both forms during his service in the Medical Department of the U. S. Army, and that the condition was not uncommon, especially the congenital displacement. Dr. O. H. Allis reported an interesting case of downward displacement occurring in his practice.

Dr. John V. Shoemaker followed with a paper on "Napthol; Its Use and Value in Medicine." (See page 501.) Dr. A. Van Harlingen also referred to his experience with naphthol and its great value in scabies and other skin affections to which Dr. Shoemaker referred. Treatment of psoriasis was the subject of the next paper, which was read by Dr. Van Harlingen. The various remedies used internally were taken up in detail, and those preferred as the most effective after using diuretics, were to one class Fowler's solution, and to the other iron in some form. The speaker next discussed the various methods of removing the scales, after which naphthol, crysorrhin and pyrogallic acid were each considered as means of treating the disease locally. He dwelt on the poisonous effect that might arise from the use of naphthol, and showed medical gelatine rolls which, while suitable for local use, were hardly applicable for want of the proper apparatus in private practice. In closing, Dr. Van Harlingen commended pyrogallic acid as one of the very best remedies for local application to psoriasis. It was free from the irritating and many unpleasant effects of crysorrhin.

Dr. Shoemaker added, I think, that Dr. Van Harlingen has included in his interesting and instructive paper about all the remedies which are used in this disease. Believing that psoriasis is due to an accumulation in the blood of an excess of certain excrementitious substances, a condition known as one of suboxidation, I always begin and continue the treatment with the object of overcoming this peculiar state of the system. I accomplish this purpose by using such remedies as will act effectively upon the liver and kidneys. I rely more upon removing the excrementitious substances from the blood by these organs, as well as by making the skin very active by various baths, than by giving arsenic and other preparations for their systemic effect. I do not believe in arsenic, or any other remedy, as a specific for psoriasis, and believe they only act at times by assisting to overcome this peculiar state of the blood. Napier, of Glasgow, extolled about a year ago crysorrhin, known formerly as crysophanic acid, given internally in one-half grain doses, as a remedy for psoriasis. Its action is that of a purgative pushed to toleration, and it will affect the blood and pale the skin of psoriasis patients, just as any other purgative would given under similar circumstances. In using arsenic, which I often do as an assistance to the treatment just referred to, I always prefer arsenic in the form of arsenious acid or sodium arsenite. The great objections to arsenic solutions, especially Fowler's, are their unstable state, and the improper manner in which they are often prepared. I therefore seldom use them, unless they are fresh and well prepared at the time of administration. If such solutions are kept any length of time they will undergo a change. I have not only made these observations, but have seen the same referred to in several medical journals by well-known authorities. I hold in my hand an extract taken from the *Journal de Pharmacie et Chemie*, in which M. Delahaye refers to the fungoid formation in Fowler's solution. Here is another extract, taken from Lewin's Accidental Effects of Drugs, in which the author states that "it has been proved that Fowler's solution loses arsenious acid in the course of time, probably under the influence of organic substances which have gained access to it. The acid is reduced, and escapes as arseniuretted hydrogen gas. Great loss may be occasioned in this way." As to the manner of administering arsenic for the treatment of psoriasis, I always prefer, when I can, to give it by the hypodermic method. I generally use pellets of sodium arsenite, such as I exhibit, divided in one-sixteenth, one-tenth, one-fourth and one-half grain doses, as manufactured by Dr. L. Wollf, of this city.

Prof. Bartholow in his recent work on Hypodermatic Medication speaks especially of the utility of this salt of arsenic subcutaneously, on account of it being a higher oxide than the potassium arsenite and therefore less an irritant. I usually select the inferior scapular or sacral region for the injection and repeat the operation every day until the eruption shows some signs of abating. In the meantime the constitutional and local treatment already referred to is continued. This method is precise, saves the alimentary canal and acts in a safer and quicker manner than all other means of administering arsenic for a systemic effect. I perfectly agree with all Dr. Van Harlingen has said of the local treatment of psoriasis except in the use of pyrogallic acid and naphthol. I

regard pyrogallic acid as a dangerous remedy, having seen in several instances very unpleasant systemic effects follow its use. Beisner reported in 1880 four cases of poisoning from the external application of pyrogallic acid in which two of them terminated fatally. As to naphthol, no prevention whatever need be used in applying such as I have exhibited to you. I have used it all over the body without any untoward effect, both incorporated in lard and gelatine. You have seen me spread on this naphthol-gelatine dressing on the typical case of psoriasis I had before you this evening. The dressing is easily prepared, with an ordinary tin or china cup suspended in boiling water. The operator can add ten or thirty grains of naphthol to one-half ounce of gelatine with a little glycerine, stir in the cup now suspended in boiling water and as the heat liquifies, the mass can be easily spread over the patches. Plenty of hot water will in a few days remove this dressing that can be hastily and well applied in any physician's office or at any patient's home.

Dr. Van Harlingen in response stated that he had referred to the use of diuretics in his paper and that the objection to the use of Fowler's solution could be overcome by having the preparation always freshly made. In reference to applying pyrogallic acid, he would of course only use the remedy in case the eruption was limited in extent. Naphthol had been regarded, in the form generally used, as at times giving rise to dangerous symptoms. We are, however, glad to see different results reported after the drug was freed from contaminations.

The last paper of the evening was by Dr. James C. Wilson on Hydrargyrum Formidatum. He spoke of the extent to which this preparation was now used abroad in the treatment of syphilis, by the subcutaneous method. Liebreich, who had brought forward this new drug, claimed that after hypodermic injection it would undergo disintegration, the mercury be set free and so exert its action on the lesions of syphilis. Dr. Wilson further referred to the preparation being easily soluble in water, having a neutral reaction, not coagulating albumen, and when injected beneath the skin was attended with little pain, no inflammation, or salivation.

Dr. Shoemaker said: "This paper is of much interest to me, as I have been using for some years, with good result, the hypodermic method of treating syphilis with corrosive sublimate. I have, however, found that the corrosive sublimate in from 1-10 to ½ grain doses, increased or diminished in amount according to the requirement in each case, was sufficiently effective in managing the majority of stubborn cases of syphilis. If the hydermic syringe is in good order, as well as the needle, a gold one being preferable, and the operation is performed in a careful and skillful manner, no abscesses or ill effects can or will follow the injections. I have treated many cases after this manner with the most happy effect and cannot see that the remedy presented possesses any advantages over corrosive sublimate. J. V. S.

WASHINGTON, D. C., October 25, 1883.

At the first annual meeting of the Washington Obstetrical and Gynæcological Society, held October 19th, 1883, the following officers were elected for the ensuing year: President, Dr. S. C. Busey; Vice Presidents, Drs. W. W. Johnston and J. Tabor Johnson; Recording Secretary, Dr. C. H. A. Kleinschmidt; Corresponding Secretary, Dr. Samuel S. Adams; Treasurer, Dr. G. L. Magruder; Committee on Business, Drs. D. W. Prentiss, C. E. Hagner, S. S. Adams; Committee on Admissions, Drs. H. D. Fry, T. E. McArdle, J. T. Johnson; Committee on Publications, Drs. T. C. Smith, C. H. A. Kleinschmidt, T. E. McArdle; Committee on Pathological Specimens, Drs. Johnston, Acker, and G. B. Harrison.

LETTER FROM A. B. TADLOCK, PRESIDENT TENNESSEE STATE MEDICAL SOCIETY.

KNOXVILLE, TENN., Oct. 15, 1883.

Mr. Editor: — THE JOURNAL of the 6th inst. just received, late, it is true, in reaching its destination. But it is better late than never, not having lost any of its sweetness on the desert air, nor in the tardy U. S. mail bags. It is an interesting number in many respects, scientific and professional. The subject of medical contracts, opened up by Russy, and your able answer, certainly needs to be turned over and aired, in the prevailing professional degeneracy of the times. How about the government asking bids for annual medical services and medicines for an indefinite number of United States prisoners in a county jail? And suppose a few enterprising doctors, hankering after official honors, thoughtlessly sniff at the tempting morsel without, like Dr. R., comprehending where the wrong intrudes, which are most culpable, government clerks, medical enterprise, or journals and teachers? Ventilate, Doctor, ventilate

And then brave "Ethicus" figures in facts worthy of notice. He arraigns the chief medical officer of the pension department of the government, Dr. Hood, for "endorsing homœopaths as pension examiners." The "chief" or medical referee may be "a *regular* of the deepest dye," as "Ethicus" says he claims to be, nevertheless he is but a man — human, like the rest of us, and therefore, some of the instincts common to all mortals belong even to an official. In this way, while his acts as a physician are open to criticism, the man may be defensible, if not justifiable. I am the man's champion. The tenure of office under the present administration is held solely by virtue of unflinching loyalty to its behests, or by great proficiency in political gutter-sniping. A gutter-snipe, conventionally, you know, is technically a commercial drummer. He gets his living by his trade, and so is the worthy prototype of the man who gets his office by working for other men's partisan or political interest. Both may make capital place-men without referenee to either moral worth or worthy ethical acts. But "Ethicus" unjustly chides the medical referee for "*endorsing* homœopaths." This he does not do. The Doctor only *recognizes* the medical certificates of examining boards (supposed to be physicians), appointees of the average Tom-and-Jerry congressman selected from the most active gut-

ter-snipes of the last campaign—selected without reference to any medical skill or qualification whatever, otherwise they would have been excluded as of a more worthy following. True, pension examiners receive their certificates of appointment from the Commissioner of Pensions, but the Commissioner now has no discretion in the matter, being the subsidized and humiliated servantof political bosses, known as Congressman, else the charger waits his official head. Here medical matters no longer belong to medical men, as they do in the army. Civil service reform even takes no interest in the medical wants of the Pension service. And the government, while looking to the medical department for medical and surgical fitness for army life and duties, now no longer cares for the qualification of medical men to do justice by her sick and maimed wards. It was for demagogical purposes that this most important matter has been denied medical men, and consigned to the quagmires of political "still-hunting." If the profession silently submits to this disgraceful divorcement without protest, let the first complaint come up from the outraged and mistreated pensioner and pension applicant. It is well known that the former Commissioner, Bennett, asserted the prerogatives of his office, and maintained its integrity by recognizing medical qualification in all of his appointments, thereby deserving great credit for his uncompromising stand in this respect. But times changed, and with them men and morals. Self respect, national pride, and professional honor now lurk enslaved in the poisoned evils of truckling government patronage, such as manhood should abhor as but lethal breeding beds of choleraic vibriones and pus bacteria. But let us not upbraid too severely those who by nature value manhood thus subdued under partisan shackles more than the disenthralled manhood of a free American citizen, for the preference of you and me and Ethicus might be(?) slightly modified, if submitted to an analysis in the same kind of crucible. Let us be charitable. I defend the man, but confound his acts. In allowing the official to envy our freedom and indepence, grant him pity for his tastes, credit for his enduring patience, and question not that it is all meant by *him(?)* to work out good for those who trust and are of long suffering. In this way charity might not be misplaced, even at the door of the "endorsed homœopath. Let the profession purge herself of incompetency (endorsed, too, if you please). Then demand of the government the right to control medical matters in civil as well as in military affairs. This right obtained, the occupation and endorsement, with official prestige of charlatans, under any name, will figure less in the impending perils of the ballot-box, to the credit of the profession and the good of the nation and people.

OCTOBER 21, 1883.

DEAR DR. DAVIS:

I am much pleased with your report on Prac. Med., and notice your recipe for typhoid fever. For several years, I have used a prescription for typhoid fever somewhat as follows, and have been much pleased with it. Almost all of my typhoid fever patients recover, though I have no hospital practice.

℞. Sugar, gum arabic, spts. turpentine, āā.....ʒi.
Syr. ipecac.....ʒii.
Iodide sodium.....gr. x.
Cinnamon water, q. s. ft....ʒii.
ft. sol.....
S. Teaspoonful every 2 to 4 hours.

Sponging with warm or cold water is grateful. Small doses t. d. of quinine in some cases; sub. nit. bismuth and salicine to check diarrhœa, about cover the drugs used.

Good soups, fresh fruit juices, as from baked apples, and their well-cooked pulp, and orange and lemon juices, and sometimes liquid lactopeptine t. d. after nourishment, a teaspoonful. Fruit juices are too much neglected in fevers.

Change body linen every 24 or 48 hours; bed linen every 42 to 72 hours. Q. C. SMITH.

AMERICAN PUBLIG HEALTH ASSOCIATION.

CONVENTION AT DETROIT, MICH., NOV. 13, 1883.

Undernoted please find list of railroads over which transportation can be obtained at reduced rates.

Be good enough to say by return mail whether you desire to use any of these roads in your journey to and from here, and the necessary certificates will be sent you at once, on presentation of which at the ticket offices transportation will be furnished at reduced rates. Passengers from any point on line of Louisville and Nashville railroad will not require certificates, but can purchase tickets to Detroit at starting point, and will be returned at one-third fare:

Flint & Pere Marquette railroad, half fare.

Wabash, St. Louis & Pacific, 1⅓ fare round trip.

Lake Shore & Michigan Southern, 1⅓ fare round trip.

Detroit & Cleveland Steam Navigation Co., half fare each way.

Michigan Central & Canada Southern, 1⅓ fare round trip.

Detroit, Grand Haven & Milwaukee, 1⅓ fare round trip.

Detroit, Lansing & Northern, 1⅓ fare round trip.

Columbus & Hocking Valley, 1⅓ fare round trip.

Grand Trunk railway, 1⅓ fare round trip.

Great Western railway, 1⅓ fare round trip.

Louisville & Nashville, 1⅓ fare round trip.

Jeffersonville, Madison & Indianapolis, 1⅓ fare round trip. W. K. MUIR,
Chairman Transportation Committee, Detroit, Mich.

TRAINED NURSES FOR THE COUNTRY.

EDITOR OF JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Country towns and villages are destitute of trained nurses. It is with the greatest difficulty that one can be obtained for any consideration. Almost every village has one or two self-styled nurses, who are

usually stupid, ignorant, and devoid of every qualification which would make them useful in the sick-room. It is difficult to conceive of a class of persons whose services in a community are better appreciated than a well-trained and efficient nurse.

It is not easy, and perhaps impossible, for physicians in rural districts to educate nurses, or at least to give them that kind of education which is required for a good nurse. We will have to look to training schools for them. Their services will be remunerated as well, and possibly better, than the district school teacher, while the position is not more exacting, nor the duties more arduous.

At the present time, it is evident that the country requires more nurses, and less doctors, more training schools for nurses, and less diploma-mills for grinding out doctors.

J. F. JENKINS, M.D.

TECUMSEH, MICH.

FŒTID AND SWEATING FEET.

RED OAK, IOWA, Oct. 25, 1883.

Dear Editor: — In the AMERICAN MEDICAL JOURNAL of October 13, p. 428, among the "Medical Progress" articles, there is one for "Relief of Fœtid Sweating Feet by Subnitrate of Bismuth," a remedy which I have never tried, but will inclose a formula that with the correct observation of the instructions has been very certain of success in all the cases on which I know of its being tried:

℞ Aluminii et Ammo. Exic., grs. 2
Acidi Boracici..... " 2
Aquæ Simp. or Rosæ..... " 35

Mix. Sig.: Apply with soft sponge without rubbing, just as soon as the shoes and stockings are removed, while the feet are yet moist. This is quite necessary, as also the care not to rub.

Let this be repeated every two or three days, in the evening, and I have yet to know of its failure to check the profuse sweating or to lessen the fœtid odor. Respectfully,

A. M. VAIL, M.D.

BOOK REVIEWS.

THE DISEASES OF MEN.

(1) PRACTICAL CLINICAL LESSONS ON SYPHILIS AND THE GENITO-URINARY DISEASES. By Fessenden N. Otis, M.D., Clinical Professor in the College of Physicians and Surgeons. New York: Surgeon to Charity Hospital, etc., New York. Bermingham & Co., 1883; pp. 584.

(2) SEXUAL IMPOTENCE IN THE MALE. By Wm. A. Hammond, M.D., Professor of the Diseases of the Mind and Nervous System, New York Post Graduate Medical School, etc. New York: Bermingham & Co., 1883; pp. 274.

(1) Professor Otis' book is a volume of the recorded experience of a wide awake observer, superadded to and balanced by as candid a *resume* of our bulky venereal literature as has yet been published. The excellence of this work is due in no small degree to the clear-headed, and, if the term is permissible, the *business-like* way in which the author attacks the vexatious problems in pathology, hygiene, and therapeutics, constantly presented by the clinical aspects of syphilis and gonorrhœa. In its series of clinical lessons, as the chapters are modestly styled, this work really embraces a study of the genito-urinary diseases more exhaustive and analytic than any of the standard treatises. On the other hand, it is not so painfully and artificially "systematic" as to leave the impression that the author had been too ambitious to produce a great work, which should become authoritative and final. Often it appears that the outcome of such ambitious writing is a book wherein clinical facts are presented obscurely, wrongly colored, *theoretish*. Prof. Otis shuns this fault. The subject of syphilis occupies the entire thirty chapters comprising Part I., or about one-half the book. Part II. is a treatise on gonorrhœa and its *sequelæ*. It is an admirable exposition of the latest knowledge on the subject, containing a summary of the views and practices of various modern authorities, and the writer's own estimate of the relative importance of each.

It is particularly to be commended in the constant references which are made to a variety of different opinions, as in the case of the value of "specific" treatment in clap; that more is given the reader than a barren catalogue of opposing or differing practices from which to select. We have the satisfaction of finding, in connection with each subject discussed, a very careful analysis of all available information to determine the vital question, *which* theory, *which* treatment deserves the most credit? The work is more valuable as an authority than Sir Henry Thompson's, not merely because it is later, but because it is also fairer and more exhaustive.

(2.) In dealing with delicate topics it is the habit of some writers to make an apology to the reader for the introduction of necessary but unsavory facts and records. With persons who have strong stomachs this is superfluous, but possibly all of us feel the subtle flattery conveyed in such an apology and prefer to be thus propitiated before any very nauseating recital of moral perversion or degradation.

We receive no such consideration at the hands of Prof. Hammond in his work on Sexual Impotence in the Male. It ought not, perhaps, to be laid as a fault against a writer that his style is peculiarly sketchy and entertaining. Yet it may possibly be asked as a question of good taste whether a certain class of subjects should not be handled with more of reserve and soberness than we find in the pages of this book. The numerous cases cited throughout the work necessarily partake of the nature of tales, and although their history and treatment is carefully detailed, yet enough adventitious coloring is worked into the description of each case to make it highly entertaining reading to non-medical readers. This fact has been accidentally illustrated more than once in the brief time the book has lain upon the reviewer's table.

Aside from this question of good taste, the work is an extremely valuable one—covering a ground hitherto partially explored, and covering it satisfactorily and clearly. Those important factors in man-

agement, viz.:—hygienic measures and moral (meaning psychical) influences are ably and satisfactorily discussed. An extended experience has enabled the author to speak with comparative certainty of the value of a few drugs, prominently sodium bromide, in the class of cases requiring medication.

A notable omission from the list of causes of temporary and also of permanent impotence is found in the case of priapism, which is given only a passing allusion. E. W. A.

What to Do First in Accidents and Emergencies. A Manual Explaining the Treatment of Surgical and Other Injuries in the Absence of the Physician. By C. W. Dalles. Second Edition. P. Blakiston, Son & Co., Philadelphia.

This little book of one hundred and sixteen pages is well written and gives most excellent advice on the subjects treated. That a second edition has been demanded is good evidence that the work has proved useful. In its present form there are several new illustrations and much new matter.

The subject is treated of under the following main headings: Obstruction to Respiration; Foreign Bodies in the Eye, Nose and Ear; Fits or Seizures; Injuries to the Brain; Effects of Heat; Effects of Cold; Sprains; Dislocations; Fractures; Wounds; Railroad and Machinery Accidents; Hæmorrhage; Special Hæmorrhages; Transportation of Injured Persons; Poisons; Domestic Emergencies: Signs of Death; Supplies for Emergencies.

Contagious Diseases of Domesticated Animals. Investigations by Department of Agriculture. Washington Government Printing Office, 1883, 8vo, 271 Pp., Illustrated.

This work will interest the medical practitioner by showing how well veterinary medicine is keeping pace with the medical progress of the day, and how closely allied the studies of the causation of disease, especially in relation to the germ theory, have become with man and the lower animals. Dr. D. E. Salmon, D. V. M., furnishes a very thorough and critical article on "Southern Cattle Fever and Fowl Cholera," followed by the interesting studies of Dr. H. J. Detmen "Among the Cattle and Sheep of Texas," with the reports from other veterinary surgeons—Drs. Hines, Miller and Rose—particularly on "Contagious Pleuro-Pneumonia." Dr. Ezra M. Hunt discusses in a very practical paper "The Duty of the United States Government as to Contagious diseases," and Mr. Edwin J. Moffat, the London correspondent of the Department, gives interesting details regarding the "Foot and Mouth diseases of Great Britain." The text is well illustrated by some excellent micro-photographs, reproduced by the lithocaustic method, of micrococci, schizophytes, diseased liver, kidney and spleen tissues, and the sheep parasite, the strongylus contortus.

Dr. Salmon shows that the fever so prevalent, and fatal to all but young animals, in the Southern States, which affects cattle brought from the North, and supposed to be due to the influence of increased temperature upon imported cattle, is really the Texas fever and infectious; the native cattle, when taken beyond the infected districts, carrying that infection with them. He also shows that the infection of Texas fever is spreading over new territory, and that snow and ice are not the barriers they have heretofore been considered. He has succeeded in tracing the line which separates the infected from the uninfected parts of Virginia for many miles, and has traced it as definitely as possible, furnishing a map with his report, which shows at a glance the boundary line of the infected territory, so far as traced. His inoculations with splenic pulp are also very interesting. The only microscopic germ found was a micrococcus which was not inoculable. The indications are that infected cattle may infect fresh pastures to which they have access, and thus communicate the disease.

Vaccination of fowl cholera has been very thoroughly tested. Dr. Salmon devotes much space to the methods of Pasteur and others for attenuating virus. He establishes an immunity sufficient to affect birds during their whole lives; and is a strong advocate for vaccination in hog cholera, fowl cholera, black leg and charbon.

The Collective Investigation of Diphtheria. (as conducted by the *Therapeutic Gazette.*) By J. J. Mulheron, M.D. Detroit, 1883. Geo. S. Davis.

If it could be made in any way apparent that the *majority* of opinion at any one time upon a scientific question necessarily, or even probably, is correct, the book before us would have the merit of summarizing such opinion and declaring the result.

The volume is made up of letters from about one hundred physicians, in reply to circulars sent by mail asking each one's opinion as to the cause, nature and treatment of diphtheria.

The expectation of adding anything to scientific knowledge by such a method, is based either upon the assumption that the balance of medical opinion must be in the main correct, or else upon the supposition that some real pathological discoveries will be brought to light, whose obscure authors might otherwise have failed to publish them.

We deny the first assumption *in toto*. It is reasoning in a vicious circle to uphold it. Average medical opinion is based upon medical authorities. The average practitioner, who has to deal with hundreds of complex questions, can add but little to the minute investigations of master pathologists in their chosen specialties. It taxes his industry even to keep abreast of modern discoveries in the wide field he has to cover. How is it possible, then, that the average judgment of average men, obtained by a mere "counting of hands," can be considered of any value other than as a reflex of the teachings of the authorities which each of the witnesses depends upon for his knowledge?

Medical, like other scientific discoveries, are made not by public opinion, but by individuals, and such individuals who have the mental capacity of original investigation do not need the patronage of a bureau of "collective investigation" to discover their talents to the world.

On the reverse side, it may be said that this book has certainly no tendency to falsify any facts, but rather to confirm present ideas. Although not likely to add anything to scientific knowledge, it may excite interest and discussion in questions rather neglected.

The subject of diphtheria is a barren one, showing in very strong light the weakness of the system in a case where so little is known. The conclusions of the editor, after summing up the various views of his contributors, are neither more nor less valuable that if he had taken these opinions at first hand from the standard works, instead of letting the country practitioners do this for him and send him the results. As "collective investigation," so-called, seems to be a new departure in medical investigation, we desire to say a favorable word touching the fair-minded and earnest manner in which the compiler has dealt with the impossible problem set before him. Similar investigations, conducted with a view to obtaining some single definite information (such as statistics), with a less democratic and wholesale list of contributors, may yet prove a most valuable means of balancing and completing our information on practical medical questions. E. W. A.

MISCELLANEOUS.

CHICAGO TRAINING SCHOOL FOR NURSES.

The second graduating exercises of the Chicago Training School for Nurses was held on the 22nd of this month. Two years have passed since the training school started with two wards in the County Hospital and six pupil nurses. It now has seven wards, thirty-six pupil nurses, and two probationers. The small hired house, at a very inconvenient distance from the hospital, has given place to the nurses' home, situated within a block of the work.

During the last year 119 applications have been received from persons who wished to become trained nurses. Thirty-four of these were accepted on probation, and only twenty-two out of the number were accepted as pupil nurses. The number of patients cared for in the training school wards during the past year has been 4,301; number of births, 144; In the home the average number of the family has been 30; average for table expenses per month $234. It was found necessary, in order to complete the new home to borrow money for the purpose. Therefore, bonds to the amount of $10,000 were issued, secured by mortgage on the property. The society has the privilege of paying these bonds at the expiration of two years from the time they were issued.

The treasurer, Mrs. H. L. Frank, reported cash on hand, $6,436.84; amount of building fund, $13,210.36; bonds, $10,000; amount received from Cook County Hospital for services rendered, $6,350; received for private nursing, $514; private memberships, $1,440; subscriptions, $997.75; interest from banks, $306.32; seersucker sold to nurses, $152.59; total, $39,507.55; expenditures, building, $22,-616.51; hospital expenses, $3,238; household expenses, $5.329.55; taxes, $97.68; insurance, $168; furniture, $667.02; printing and postage, $206.37; balance, $6,436.84.

The following were elected as members of the new board of directors: Mrs. Lawrence, Mrs. J. C. Hilton, Mrs. Edward Wright, Mrs. Thomas Burrows, Mrs. W. S. Smith, Mrs. H. L. Frank, Mrs. W. G. Hubbard, Mrs. Dr. Stevenson, Mrs. S. L. Williams, Mrs. A. A. Carpenter, Mrs. Orson Smith, Mrs. A. A. Sprague, Mrs. Clinton Locke, Mrs. J. M. Walker, Mrs. E. Blackman, Mrs. Charles Hitchcock, Mrs. G. M. Hale, Mrs. G. W. Pitkin, Mrs. Judge Rogers, Mrs. N. K. Fairbank, Mrs. James Flower, Mrs. W. Penn Nixon, Mrs. G. W. Smith, Mrs. George L. Dunlap, Mrs. A. C. Bartlett.

Seven pupils were graduated. The diplomas were given to them by Dr. H. A. Johnson, who made a short address, giving them practical advice. Drs. Lyman, Mitchell and Briggs, Mrs. Wolctt, of Boston, County Commissioner Donnersberger and J. Y. Scammon spoke in regard to the work of the school.

NEW INVENTIONS.

INSTRUMENT FOR OPENING PELVIC ABSCESSES.

Prof. Clinton Cushing, M.D. (*Pacific Medical and Surgical Journal*, September), has devised an instrument, consisting of two blades, which when closed form a trocar, and when introduced into the abscess direct, or along the side of an aspirator needle, the handles can be closed, and the extremities separated so as to act as a dilator, and thus tear the connecting tissue sufficiently to furnish the most ample room for the escape of pus and the introduction of a drainage tube. The advantage of this instrument over a knife, he claims, is that the danger of injuring the ureter or an artery is reduced to a minimum; and the advantage over a trocar, is that of being able to make a large and free opening before withdrawing it, and with no additional risk.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, JULY 1, 1883 TO SEPTEMBER 30, 1883:

Bailhache, P. H., Surgeon; detailed as member of board to examine candidates for promotion, Aug. 23, 1883; detailed as Surgeon-in-charge, Cape Charles Quarantine Station, September 5, 1883.

Miller, T. W., Surgeon; granted leave of absence for twenty-five days, August 31, 1883.

Wyman, Walter, Surgeon; detailed as member of board to examine candidates for promotion, Aug. 23, 1883.

Long, W. H., Surgeon: granted leave of absence for twenty days, Sept. 25, 1883.

Smith, Henry, Surgeon; directed to take charge of the quarantine service at the Capes, July 29, 1883.

Stoner, G. W., Passed Assistant Surgeon; granted leave of absence for thirty days, Aug. 24, 1883; to inspect the relief stations along the coast of Maine, Sept. 29, 1883.

Goldsborough, C. B., Passed Assistant Surgeon; granted leave of absence for thirty days, Aug. 29, 1883.

Banks, C. E., Assistant Surgeon ; relieved from duty at Portland, Oregon, and to report to the Surgeon-General at Washington, July 10, 1883.

Carmichael, D. A., Assistant Surgeon ; granted leave of absence for ten days, Aug. 31, 1883.

Peckham, Assistant Surgeon ; to proceed to Portland, Maine, for temporary duty, Aug. 25. 1883.

Devan, S. C., Assistant Surgeon ; to proceed to Portland, Oregon, and assume charge of the service, Sept. 11, 1883.

Kallock, B. C., Assistant Surgeon ; to proceed to Philadelphia, Pa., for temporary duty July 25, 1883 ; to rejoin his station (New York) July 31, 1883.

Yemans, H. W., Assistant Surgeon ; relieved from duty at Sitka, Alaska, and to proceed to Portland, Oregon for temporary duty July 10, 1883 ; to proceed to San Francisco, Cal., reporting for duty to Surgeon Vansant Sept. 11, 1883.

Glennan, A. H., Assistant Surgeon ; to remain at Norfolk, Va., until further orders. July 29, 1883.

Wasdin, Eugene, Assitant Surgeon ; to proceed to New Orleans, La., for temporary duty August 2, 1883 ; to proceed to Mobile , Ala., for temporary duty August 27, 1883 ; to rejoin his station (New Orleans) as soon as practicable. September 25, 1883.

PROMOTIONS.

Guitéras, John, Passed Assistant Surgeon ; promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury from September 1, 1883. August 31, 1883.

Wheeler, W. A., Passed Assistant Surgeon ; promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury from September 1, 1883. August 31, 1883.

RESIGNATION.

O'Connor, F. J., Assistant Surgeon ; resignation accepted by the Secretary of the Treasury, to take effect August 1, 1883. August 2, 1883.

APPOINTMENT.

Wasdin, Eugene, M.D., of South Carolina, having passed the examination required by the regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, August 2, 1883. August 25, 1883.

SOUTHWESTERN WISCONSIN MEDICAL ASSOCIATION.

EXCELSIOR, WIS., Oct. 17, 1883.

Dear Doctor :—The fifth regular session of the Southwestern Wisconsin Medical Association will be held at Lone Rock, Wis., Wednesday and Thursday, Nov. 21 and 22, 1883, commencing at 10 o'clock A. M., on Wednesday. Reports will be made by the following standing committees :

Surgery (No. 1.)—U. P. Stair and R. H. Delap. Obstetrics (No. 2.)—T. F. Stair and Garner. Practics of Medicine (No. 3.)—Wall and Haskall. Pathology (No. 4.)—Dinsdale and McGrath. Therapeutics and Materia Medica (No. 5.)—Coats and Kermott. Gynæcology (No. 6.)—Casey and Helm. New Remedies (No. 7.)—Armstrong and Gyer.

J. C. WRIGHT, M.D., Sec'y.

P. S.—It is the desire of the Association to have all regular physicians present, that we may have an enjoyable and profitable session. J. C. W., M.D.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING OCTOBER 27, 1883.

Surgeon W. K. Van Reypen detached from the Naval Hospital, New York, and ordered to the U. S. S. Powhattan.

Surgeon H. M. Wells detached from the Naval Laboratory, New York, and ordered to the Naval Hospital, New York.

Medical Inspector A. C. Gorgas' orders modified so that he will be detached from the Naval Hospital, Chelsea, Mass., on December 10th instead of on November 10th.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM OCTOBER 19, 1883, TO OCTOBER 26, 1883.

Bache, Dallas, Major and Surgeon ; assigned to duty at Willet's Point New York (par. 1, S. O. 238, A. G. O., October 18, 1883).

Horton, S. M., Major and Surgeon ; leave of absence for one month, with leave to apply for an extension of three months (par. 6, S. O. 216, Department of the Missouri, October 20, 1883).

Barnett, Richards, Captain and Assistant Surgeon ; assigned to duty at Columbus Barracks, Columbus, Ohio (par. 1, S. O. 240, A. G. O., October 20, 1883).

Maus, Louis M., Captain and Assistant Surgeon ; assigned to duty at Fort A. Lincoln, D. T. (par. 4, S. O. 180, Department of Dakota, October 15, 1883).

NECROLOGY.

WOODMAN, LUCIUS C., M.D., was the son of Rev. Jonathan Woodman, and was born in Sutton, Caledonia county, Vermont, March 20, 1828 ; died at Paw-Paw, Michigan, April 12, 1883, aged fifty-five years.

Dr. Woodman, after receiving a fair academical education, studied medicine in the office of Dr. Kimball, of Lowell, Massachusetts, and graduated at the Medical Department of Vermont University, located at that time at Woodstock, Vt., in 1847, at the age of 21. Being threatened with consumption, of which disease his elder brother, also a physician, had died, his friends advised a change of climate, and he came to Michigan about 1851. After measurably regaining his health, he commenced practice with Dr. Andrews, of Paw-Paw, Michigan, with whom he continued till the breaking out of the war of the Rebellion, when he entered the Third Michigan Cavalry regiment as Assistant Surgeon, and served in it as

such until 1863, when he was commissioned Surgeon of the Eleventh Michigan Cavalry, and continued to serve in that capacity till the close of the war, and was mustered out of the service in August, 1865. During the war he was at one time taken prisoner, and spent a few weeks in Libby prison.

As an army surgeon he was kind, faithful in the discharge of his duties, and exceptionally skillful. He was truly the soldier's friend, and by all ranks universally beloved. "Everywhere brave, he faced a thousand deaths to stand between death and the soldiers."

At the conclusion of the war he went to South Haven, Michigan, where he practiced his profession till May, 1877, when he returned to Paw-Paw, where he remained till his death.

As a physician and surgeon Dr. Woodman had a wide reputation, which he thoroughly merited, for he did his work faithfully and well. He was a careful and skillful operator, and an exceptionally fine diagnostician, particularly in diseases of the heart and lungs. He was by nature and study singularly well equipped for the successful practice of his profession in all its branches. The thorough hold he had upon his patients and friends was something almost wonderful. Dr. Woodman was a member of the Van Buren County Medical Society, of the Michigan State Medical Society, and of the American Medical Association. He left two young sons, who are doubly orphans, having lost their mother only a few weeks previous to the death of their father.

J. ANDREWS, M.D., of Paw Paw, Michigan.

BRALEY, NORMAN WING, M.D., was born in Pomfret, Vt., August 14th, 1823; died at Barre, Vt., September 11th, 1880.

He was the eldest child of Geo. W. Braley and Desire Brockway Braley, natives of Stamford, Conn. His father was descended from a Scotch-Irish family, who came in the early part of the present century to this country. Norman was the eldest of six children, three of whom survive him. His preliminary education was from the district school at home, and from the academy at Woodstock. He studied medicine with Dr. P. R. Palmer, and graduated at the Medical College at Woodstock in June, 1844.

He settled in medical practice late in the year 1844, at Washington, Vt., where he remained about six years, during which time he was married to Miss A. P. Calef, of Washington. In 1852, after having traveled through the West in search of a more desirable location, he settled in Chelsea, Vt., in copartnership with Dr. McClure, when at the end of two years the latter retired, leaving Dr. Braley alone.

Then he made an extensive reputation, and won the confidence of the public and of his neighboring physicians, so that he had a large consultation practice, and was considered the leading physician of Orange county.

In 1872 he removed to Barre, and partially retired from medical practice. Here he became President of the National Bank of Barre, and engaged in manufactures and other financial business. Still, he occasionally practiced his profession until his death, which was after a short illness at his home.

He left a widow and three sons, the eldest of whom is a physician, and succeeds his father in practice at Barre (Dr. B. W. Braley). The two younger are yet at school. Dr. Braley was everywhere respected for the purity of his character, for his agreeable presence, with a suavity of manner that made him always a welcome guest, and for his skill and fidelity in attendance upon the sick. He died lamented by a large circle of real mourners, and his loss will long be felt in the communities in which he was so prominent and useful a member.

O. F. FASSETT, M.D.

YOUNG, NOBLE, M.D., of Washington, D. C. Was born in Baltimore, Md., June 26, 1808; died at the residence of his son-in-law, Maj. H. A. Egbert, at Sackett's Harbor, N. Y., April 11, 1883. He prepared for college at the Catholic seminary in Washington. Entering Columbia College, he took a regular course, his medical degree in 1828. He then began the practice of his profession, and at the time of his death was the oldest practitioner in Washington city, and lived for nearly sixty years in the same house, on Pennsylvania avenue. Dr. Young was a man of extensive acquirements, a good Latin and French scholar, and particularly fond of the best belle-letter literature. He was most entertaining in conversation, a good writer, and a forcible debater, and one of the most attractive lecturers on the general principles and practice that any college could boast of. Dr. Young was one of the chief promoters and founders of the Medical Department of the University of Georgetown College. This school was opened in 1849, and Dr. Young held the chair of the principles and practice until 1876, when he resigned, and was elected emeritus professor. He was for many years connected with the Board of Health prior to the war. During and since the war he was Physician to the Jail. His contributions to medical literature are chiefly addresses. He was one of the charter members of the Medical Society of the District of Columbia, and one of the original members of the Medical Association of the District, and filled the various offices of each, including that of President, and member of the American Medical Association since 1848. He was a member of the Board of Directors of Columbia Hospital forWomen. These institutions convened special meetings, and passed resolutions of respect for his memory. The doctor married, early in his professional life, the daughter of Dr. Alexander McWilliams; she died less than a year before himself. He leaves five children. His funeral took place from Trinity church, the Rev. Messrs. Addison and Forrest officiating. His remains were followed to the last resting place in the Congressional cemetery by a large concourse of relatives and personal friends.

J. M. T.

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. I. SATURDAY, NOVEMBER 10, 1883. No. 18.

ORIGINAL ARTICLES.

WHAT MEANS CAN BE JUDICIOUSLY EMPLOYED TO SHORTEN THE TERM AND LESSEN THE PAIN OF NATURAL LABOR?

BY JOHN MORRIS, M.D., OF BALTIMORE.

(Read before the Section on Obstetrics and Diseases of Women, June, 1883.)

In no one thing has the wisdom and genius of the age been more thoroughly exhibited than in the advance and elevation of the art of midwifery. Once considered an inferior branch of medicine, it has, through the vigor and enlightenment of those pursuing it, risen to the highest rank in the scale of the sciences. Men have learned to properly appreciate the knowledge and skill by which, in the most critical hours of existence, pain is ameliorated, sorrow assuaged, and life saved. Through the goodness of God, the original curse placed on the mothers of men has been softened, if not nullified. "In sorrow thou shalt bring forth children" will, before this generation has passed away, be but a record of the agony of the past.

In the consideration of this subject, my purpose is to present some views to you, based on my own practice, concerning the management of women in labor. My object in the presentation of these views is to elicit discussion and to bring out the experience of the gentlemen assembled in this Section, a large number of whom I know have practiced midwifery for many years. There is still, I hold, enough to be learned concerning parturition to engage the attention of even the most accomplished student. I shall confine myself entirely to the management of natural, uncomplicated labor, as my time is limited, and I deem this branch of midwifery of the most practical importance. Meddlesome midwifery is, of course, to be deprecated, and the suggestions I am about to make can only apply to what are termed cases of lingering labor.

There are three stages or conditions in which labor may become lingering, and to deal with these states successfully, different procedures must be made use of. First, labor may be lingering when the head is delayed at the brim of the pelvis; second, when the os has dilated to some extent, and the head has descended into the vagina; and thirdly, when it has reached the vulva and impinges on the perinæum. It is usual to describe lingering labors as occurring in the first and second stages, but I think the division I have adopted will serve better for the elucidation of the subject.

When labor is tardy in the beginning, the os dilating very slowly, the pains feeble and irregular, and the head high up, means may be carefully employed to hasten its progress; but if the woman is cheerful and hopeful, interference may be delayed. This delay must not be suffered to extend, as Churchill and others have recommended, for twelve or sixteen hours, for, if the woman's powers, are allowed to become exhausted in the first stage, instrumental interference becomes a necessity in the second. In the condition described the os is frequently dilatable, but the membranes do not come down to act as a dilating wedge. In these cases it is good practice to detach the membranes around the cervix, and Brown, of Vienna, recommends the introduction of an elastic catheter between the chorion and the walls of the uterus for this purpose; but this can be much better effected, in my judgment, by the cautious use of the finger. After the membranes around the cervix are detached in this way, if gentle pressure is used around the whole margin of the os with the soft part of the finger, gently stretching it, the bag of waters will commence to project, the os will gradually dilate, and the pains become effectual. I have seen many cases of labor in this stage expedited by this plan. In some instances the membranes rupture prematurely, and the head becomes the dilating force. These cases are usually very painful, but they can be greatly hastened if the finger be swept cautiously around the os at each pain. In cases of tardy dilatation of the os, due to rigidity, in which the woman suffers acute pain, the administration of opium is most beneficial, and should always be resorted to. A hypodermic injection of ten drops of Majendie's solution, or thirty or forty drops of McMunn's elixir, given internally, acts like a charm. Ineffectual contractions do injury to the woman, and when you cannot advance labor you had better arrest it. I do not think the administration of chloroform is wise at this stage.

There is occasionally a form of unequal, spasmodic contraction, well described by Velpeau, which is sometimes confined to the fundus, sometimes to one of the angles, or to a portion of the anterior or posterior wall, or one of the sides of the uterus. The pains are very acute, but merely exhaust the woman's strength, and, unless an anodyne is administered, labor will be prolonged indefinitely. Belladonna has been used and much praised as a remedy in this condition, but in my hands it has proved utterly useless. Brown's colpeurynter introduced into the vagina, and fully distended with hot water by means of Davidson's syringe, is, beyond doubt, the speed-

iest and best means to produce relaxation of all the parts and hasten the labor. It is astonishing how rapidly the os will dilate by the means of this instrument. I have seen by its use in cases of eclampsia, apoplexy, hæmorrhage, etc., the os sufficiently dilated in a few hours to admit of the application of the forceps, and a rapid termination of the labor. My experience in cases of this kind has taught me its usefulness in normal labor. The colpeurynter may be emptied and re-filled every half hour until dilatation is effected[1].

There is a condition of the uterus which retards labor and gives rise to trouble. The os is dilated to some extent, but the fibers of the cervix above it contract, forming a rim or band. Barnes' hydrostatic bags can be used with great advantage to relax the contracted cervix and allow the descent of the head; but in ordinary cases of contraction I think the colpeurynter serves a better purpose.

The long forceps are frequently resorted to when the head remains for a length of time at the brim of the pelvis, but their application will seldom be necessary if the means I have indicated be cautiously and judiciously employed. I have not found it necessary to perform what is termed the high operation more than three or four times in a midwifery practice of more than thirty-seven years. In addition to the measures I have suggested at this stage the patient must be kept out of bed in a vertical position, and not suffered to bear down or make any muscular effort. There is no doubt that the erect posture is the best before the head descends into the lower strait. The conservation of the woman's powers, too, at this period is of the greatest importance.

There is usually no danger to the life of the mother in the first stage of labor as long as the membranes remain intact, and, on this account, it may be argued that interference is not necessary; but this view I hold is both inhuman and unscientific. Inhuman, because it condemns the woman to unnecessary suffering; and unscientific because it leaves agencies unused and powers unaided, which, if employed, would shorten a painful and vital process.

In what I term the second stage, that is when the head has descended into the pelvic cavity, there are two conditions of lingering labor. In the first, though the os may be pretty well dilated, the labor is retared by the firmness, dryness and want of distensibility of the vagina. Free injections of hot water are useful at this time, and if the membranes be intact it is good practice to rupture them. When the vagina is extremely dry and hot, after the use of the hot water douche, the introduction of a large cotton tampon saturated with glycerine and lard serves a good purpose in softening and dilating the parts. I would add, that if inertia exists at this point, the administration of a drachm or two of the extract of ergot aids the other measures most effectively. But if the arrest of the head is due to occipital-posterior positions it is unsafe and unscientific to administer ergot—the forceps is the only alternative. In these instances there is very little amniotic fluid and no bag of waters is found, indeed I have seen many cases which might absolutely be termed dry labors. After the rupture of the membranes, if strong external compression be used and the os gently stimulated and stretched by the pulpy part of the finger, the pains will be prolonged, the voluntary powers of the woman excited and strengthened, and the labor progress to a speedy close.

The second lingering condition in this stage is when the head is very low down in the pelvis; the os dilated to the size of a half dollar, and found far back toward the sacrum, the head of the child being curved as with a cap by the thinned neck of the uterus. This is a most painful state, and calls loudly for assistance. The membranes, if not ruptured, must be punctured immediately, the os stretched and drawn forward toward the pubis, and strong external pressure used during each pain. Ergot is not generally necessary in this condition, but if the pains are ineffectual, its administration is most beneficial; the labor is accelerated; the woman's voluntary powers are evoked; pain follows pain, and the case has a rapid and happy termination. One of the most trying features in these cases is the intense pain in the region of the sacrum. This can be greatly alleviated by the application to the spine of an embrocation of chloroform and oil of peppermint.

Since writing the foregoing portion of my paper, I assisted in a case, the results of which prove the practicalness of the suggestions I have made.

On the morning of the 28th of May, I was called in by Dr. Ashby, Professor of Obstetrics in the Woman's Medical College of Maryland, to assist him in a case of eclampsia. The doctor had been all night with the woman; had bled her, given hypodermic injections of morphine, and used chloroform very liberally. There was no external evidence of actual labor, but the os was slightly dilated. I ruptured the membranes, distended and stretched the os, pushed down the child by forcible external compression, applied Knight's forceps inside of the uterus, and terminated the labor in forty minutes from the time I reached the house. The child was living.

The most powerful aid in all these cases is forcible external compression. A number of mechanical contrivances have been used to support the abdominal muscles, and secure regular and equal contractions of the uterus, but they are awkward and cumbrous, and do not at all compare in usefulness with the intelligent human hand.

The third and last stage of lingering labor is where the head has descended to the perinæum and owing to inertia of the uterus, or exhaustion of the woman's vital powers, or to the rigidity of the muscles of the perinæum, the labor is indefinitely arrested. Hamilton reports a case in which the perinæum was supported in this condition for one hundred and twelve hours. Ergot may be used at this point combined with external compression, but if delivery does not take place speedily the forceps should be applied. Beattie's straight Dublin forceps is the best, being light and easy of application. These are simple tractors and can do no possible harm. I have observed that if we fail in manipulations with the for-

[1] If the colpeurynter is not at hand, a small bladder will act equally as well.

ceps the labor appears to be arrested and the woman's voluntary powers cease to act, consequently unless one feels convinced that the case will be terminated speedily by instrumental interference, it is better not to attempt it. I have frequently endeavored to extricate the head by passing two fingers into the rectum, but have failed in this maneuver for the reason that the force necessary to be employed is likely to injure the soft parts. The proper management of the perinæun is very important. I have been practicing for years a form of attenuation from the very moment that the head commences to impinge upon the outlet, and I believe that I have greatly assisted the efforts of the woman. If the head is still within the uterus at this point, it is good practice to make a sweep with the finger and push the os over the occiput. I generally deliver the patient on the left side, as that position is better for the touch and use of the hand, but sometimes I have thought I found good results from placing the woman on her back and allowing her to have a few pains in that posture. I am confirmed in this opinion by the experience of a case to which I was called the morning before I left home by Dr. George B. Reynolds, of Baltimore. The head had remained at the outlet for more than three hours without making the slightest progress, when the Doctor fortunately changed the position of the patient, and the labor was quickly terminated.

In conclusion, I would state that the great advantage of the procedures briefly suggested in this paper is, that should they fail, they do not interfere with the after-use of the forceps, but rather prepare the way for their easy application. Moreover, I hold that, if properly employed, they prevent those two *bètes noir* of modern obstetrical literature, lacerations of the os and perinæum. In addition to this, I believe that post-partum hæmorrhage, that worst complication of midwifery, may also be averted, for it is the weary, out-worked uterus that floods, not the fresh and vigorous organ.

In making these suggestions, I do not wish to be understood as recommending an imitation of the *lesser labours* of the French, where the accoucheur, with rolled-up sleeves, presents himself in front of the patient, and with a great flurry and show of manipulation leads the bystanders to believe that he himself is doing the parturient work—but a scientific employment of measures which experience has proved to be both rational and useful in furtherance of the greatest physiological process known to mankind.

THE VALUE OF GYNÆCOLOGICAL TREATMENT IN HYSTERIA AND ALLIED AFFECTIONS.

BY PHILIP ZENNER, A.M., M.D., CINCINNATI, O.

[Read in the Section of Obstetrics and Diseases of Women, June, 1883, and referred for publication.]

That lesions of the female genitalia are sometimes productive of hysteria or allied affections; that the removal of the local lesion sometimes alleviates or cures the nervous disease is proven by past experience. Happy results thus obtained in the management of cases usually so intractable naturally inspire the hope that a like cause for these diseases will always be found and tempt one to the institution of like measures in their treatment. And in practice we actually see that it has become only too fashionable to institute gynæcological examination or treatment on account of the presence of some nervous affection. These efforts might be deemed laudable were it not that they have also their shadow side, that such measures may injure as well as benefit. That gynæcological examination or treatment may be productive of injury, that harm has been done in this manner should be fully recognized, lest injudicious measures throw entire discredit on the value of the assistance often afforded by the gynæcologist in the management of nervous diseases.

On account of the practical value of the questions in issue, it may not be unprofitable to consider the ætiological relationship of disease of the female genitalia to hysteria and allied affections, and the good or ill effects which may attend local therapeutical measures. Should the paper call forth the views and experience of eminent men here present, it may lead to valuable results.

Hysteria is a disease of the nervous system, perhaps affecting the entire nervous system; at least the great nervous centers are particularly involved. It depends upon peculiar pathological conditions of those centers which the microscope or other tests at present in our possession do not reveal. We therefore term it a functional disease. That a peculiar condition of the nervous system underlies the development of hysteria is seen in the fact that it usually occurs in individuals predisposed to such affections. The predisposition is generally of hereditary transmission. It is sometimes favored or acquired through false systems of education, the evils and abuses of modern society, the drain of exhausting diseases, the deprivations and toils of poverty or the like. How important a part the predisposition plays in the causation of the disease must never be forgotten when we consider the practical subjects prophylaxis and therapy.

The predisposition alone seems sometimes sufficient for the development of the nervous malady, though usually some exciting cause calls forth its first manifestations. Most frequently this is of psychic origin, emotional excitement, fright, or the slower action of some strong and absorbing passion. Not uncommonly the exciting cause appears to be some peripheric source of irritation, producing the disease in a reflex way.

The preceding remarks will enable us to consider more intelligently its ætiological relationship with diseases of the uterus and ovaries. The latter may in a reflex way, through irritation of the genital nerves, be the exciting cause of the disease in those already predisposed to it. Or they may through protracted pain or hæmorrhage, through depriving the patient of fresh air or exercise, in short through these injurious influences on general system at the same time produce the predisposition and be the exciting cause of the existing nervous malady.

Doubtless an important element in these cases is the deleterious influence of the mind's dwelling upon

the local disorder, which only too often has been intensified by local treatment.

But are local lesions a very frequent cause of hysteria? There are some who still hold that hysteria is always dependent on the disease of the female genitalia. But the facts that the disease occurs also in men; that it occurs in children before puberty; that frequently the most careful gynæcological examinations, and even post-mortem inspections, have revealed no pathological changes in those organs, and that it has been found where the uterus was congenitally missing, remove all reasonable grounds for such views. It is even doubtful whether hysteria is very frequently due to such causes. Let us examine the grounds which have given rise to this belief.

A close relationship between genital functions and nervous diseases is seen in the frequent development of the latter in important periods of sexual life. The time of puberty and the climacteric periods are especially favorable for the outbreak of nervous diseases. The periods of gestation and lactation have, though less frequently, a similar record. During menstrual periods, existing nervous manifestations are usually aggravated. But we would little understand the great economy of nature, should we attribute these disturbances to mere local causes. The great changes in sexual life are changes, not in the local genitalia alone, but in the entire organism. And because the nervous system is unusually impressible at periods of such physiological importance, we must not falsely conclude that local pathological changes should produce trouble of like consequence.

It is an undoubted fact that hysteria and uterine diseases very frequently occur together. But we must not thence hastily conclude that the one must be dependent on the other. Probably, as a rule, this is a mere coincidence, a like soil being favorable for their growth. Both occur frequently in those who have borne children; both are common in weakly individuals, these conditions being favorable for the production of uterine disease, as well as for the development of hysteria.

We must not even draw too hasty conclusions from the favorable results of therapy.

Doubtless, in many cases reported as cured by gynæcological treatment, the rest, hygienic measures and constitutional treatment did much to bring about the happy result.

If, for the above reasons, we would warn against too hasty conclusions as to ætiological relationship, we can speak far more emphatically of the frequent inutility or needlessness of local treatment. It is no uncommon thing in practice to see uterine lesions disappear without improvement of the nervous symptoms, as also the cure of the nervous disease while the lesions in the genital organs remain. The great significance of such facts cannot be overlooked. As it is very interesting in itself, allow me, in this connection, to mention a case reported by Rosenthal. In a woman who had never menstruated, but with monthly recurrences of attacks of hystero-epilepsy, after everything else had been tried, Battey's operation was performed. For five months the attacks were very light, but after that lapse of time they became as severe as before. The shock of the operation probably caused the temporary improvement. But the "unsexing" the woman had no influence on the hysterical seizures.

The lack of therapeutic success by no means proves the absence of ætiological relationship. While a local disease may have been the predisposing or exciting cause of the nervous affection, the latter, depending on now existing changes in the nervous system, has become independent of the peripheral lesion, and is unaffected by its removal.

For this very reason must our therapeutical measures usually be directed to the condition of the nervous system, more than to the possible sources of peripheral irritation.

My first experience of this kind led me to hope for very much from local treatment. The patient was under my charge, while interne in the Cincinnati Hospital, in the service of the late Dr. M. B. Wright. She had been suffering for months with constant headache immediately following a lying-in. An examination revealed ulceration of the cervix. During the treatment of the latter condition the headache disappeared. At the time, I attributed the cure of the headache altogether to the local treatment. But it should not have been forgotten that while in the hospital the woman had rest, good nourishment, and tonic medication.

A second case was one of severe migraine, of four years' standing, immediately following a confinement. An examination revealed slight displacement and endo-cervicitis. A pessary was introduced. The patient subsequently became pregnant, and during her pregnancy was entirely free from headache (a not uncommon occurrence in cases of megraine). But after delivery the headaches soon re-appeared, and now, after a lapse of three years, are as severe as they ever were. A recent examination by a prominent gynæcologist failed to detect any uterine lesion. The entire history of the case indicates that the uterine lesion was probably the exciting cause of the megraine, but the cure of the nervous disease did not follow the removal of the cause.

A third case I shall mention is that of a woman 37 years of age, who suffered from megraine from girlhood. Uterine symptoms for many years. Some operation was performed four years ago; physician told her it was for intra-uterine tumor. Since that time her condition has been much worse. The headaches, previously occurring only in paroxysms, have become continuous and of great severity, and many other hysterical manifestations have appeared. Nothing abnormal can he detected in the pelvic organs. Here the change for the worse dates directly from the operative interference, and appears to be due to local measures.

I might add details of other cases in which gynæcological interference had entirely negative results.

In a recent number of the *Berliner Klinische, Wochenschrift* (No. 10), Peretti, physician to an asylum for the insane, gives the details of a number of cases in which gynæcological examination or treatment were directly productive of injury. In some, local treatment, in others a mere examination

either were the direct exciting causes of an outbreak of insanity, or greatly aggravated the condition of those in whom the disease already existed. In proof of the direct relationship between the gynæcological measures and the mental condition, he mentions that the patients usually had delusions or hallucinations of a sexual type, in which the examining physician was the central figure. In these cases proper constitutional treatment, without gynæcological interference, led to a full recovery.

Let us briefly consider in what way local measures may be productive of injury. We have above briefly referred to the great influence of the mind in the production of nervous diseases, and this is doubtless the chief source of injury here. To a sensitive maiden nothing is more distressing or humiliating than such examination, and the matron often experiences the same feeling. Besides, there is the deleterious influence produced by the knowledge of the presence of such lesions. There are no other diseases which cause the mind to dwell so persistently on the diseased organ as those of the genital organs. This fact is universally recognized, and in just such cases this influence of the mind is especially injurious. It is always an important part in the treatment, to divert the thoughts from the genitalia, as far as possible.

There is this further consideration that local measures may do harm in the same way as local lesions, that is, in a reflex way by irritation of the genital nerves. It is probably in this way that the aggravated condition of the third patient mentioned above, after an operation is to be explained.

These possibilities of injury should never be forgotten when resorting to such measures in the individual case. Playfair states that he has often known the condition of hysterical patients to be aggravated by injudicious gynæcological interference; and Freudenburg declares beginning nervousness to be rather a contra-indication to the institution of local measures, adding that more harm is done by the latter, than by their complete omission.

What, then, can be said as to the propriety of such interference in these cases?

Fortunately, according to the bulk of experience hitherto, an ætiological relationship appears to exist, and beneficial results from local measures seem to be obtained principally in displacements, metritis, and like conditions, where the lesions generally cause decided local symptoms and in themselves demand local treatment. The propriety of such treatment in these cases can not be questioned. But we can not too strongly condemn the promiscuous gynæcological examination of girls or unmarried women, merely because there are nervous symptoms.

And even when local lesions are present, if their treatment seems to aggravate the nervous symptoms through the influence of the mind, in a reflex way, or in whatever manner, it should be discontinued. It will always be necessary to individualize, and success will largely depend upon the wise choice and judicious management of the physician, at least until the time when a fuller knowledge will enable us to know more definitely where an ætiological relationship exists, and where local treatment must be of benefit.

In the meantime it must be remembered that the general treatment, the toning up of the nervous system, is always the most important object. In fact the duty of the physician demands much more than the mere treatment of existing nervous manifestations. He should attempt to prevent the disease, to eradicate the predisposition upon which it depends. He must warn society that the idle lives of its fashionable ladies, with just such employments or amusements as heat up an already wayward imagination, or foster the morbid feelings in their nature, must produce hysterical affections in them, just as overwork, intense application to business, and, even more, the unfortunately common habits of public and private gambling, are leading to immense mental injury among men.

The physician should follow the history of the predisposed individual and attempt to prevent the development of the disease. He should inculcate the practice of proper hygienic regulations in childhood, point out a system of education that will soundly develop body and mind, and lead to habits of self-control and unselfishness, but especially at the period of puberty, by suggesting useful employment or earnest study, should he guard against means that heat a naturally too fervid imagination, and, above all, try to keep the thoughts from the genital functions.

When the disease already exists, proper moral, hygienic and constitutional treatment, hydrotherapy, etc., and, in very obstinate cases, the plan of treatment brought forward by our eminent countryman, Weir Mitchell, will often lead to happy results.

ON THE PATHOLOGY OF PHTHISIS PULMONALIS AND ITS LARYNGEAL COMPLICATIONS.

[Read before the Philadelphia Pathological Society, at its semi-annual Conversational Meeting, Oct. 22, 1883.]

BY CARL SEILER, M.D., INSTRUCTOR IN LARYNGOLOGY AND LECTURER ON DISEASES OF THE THROAT AND NOSE AT THE UNIVERSITY OF PENN. LATE CURATOR OF THE PATHOLOGICAL SOCIETY, ETC.

In bringing the much discussed subject of the pathology of phthisis again before the Society an apology is perhaps owing which will be found in the renewed interest whch the investigations of Koch in the ætiology of this disease have aroused. It is, however, not the purpose of this paper to discuss the bacillus theory of tuberculosis nor to enter in detail into the pathology of phthisis. The main object is to sketch the laryngeal complications of phthisis, and point out their difference from those noticed in tuberculosis. This can, however, not well be done without first considering, in a general way, the differences between the two diseases themselves, and I will, therefore, in a few words relate my individual views on this subject—views which are not quite in accord with those of many of the authors on pathology, but which have forced themselves upon me by pathological study and clinical observations. Let us briefly review first the characteristics of the disease known as *tuberculosis*. It may be defined as an auto-infectious disease manifesting itself primarily in the production of minute neoplasms, which may be localized in one

organ and invade others by metastasis, as when they occur in the lung and later show themselves in the larynx, or they may be disseminated throughout the system invading all the organs, as in general tuberculosis. These neoplasms, or miliary tubercles as they are termed, rapidly undergo retrograde metamorphosis which ends in caseation.

Histologically considered these tubercles consist mainly of a collection of granular lymphoid cells surrounded by a delicate reticulated tissue. Large, often branched and multinucleated cells are frequently seen which, according to some authors, are true giant cells and considered by them as characteristic of tubercle, but which I am inclined to look upon with others as sections of obstructed lymphatics, or lymph spaces, the endothelium of which has proliferated. As the tubercles grows older and the retrograde metamorphosis progresses, the cellular elements become converted into a collection of granular material and finally a cheesy degeneration takes place which involves the whole tubercle, obliterating it as such. The deposit of tubercles in the lungs occuring primarily in the interalveolar connective tissue, gives rise to a variety of changes in the lung tissue itself, the magnitude of which depends upon the number of the tubercles and the rapidity with which they are formed and decay and also upon the condition of the system at large.

In the first place a low grade of inflammation is set up in the immediate neighborhood of the tubercle the exciting cause being the tubercle itself. A small celled infiltration invades the alveolar walls. The epithelial cells lining the alveoli proliferate and become detached and swollen, thus filling the lumen of the alveoli, causing consolidation of the lung tissue. The pressure exerted upon the capillaries in the alveolar walls by the filling of the alveoli as well as by the infiltration of the connective tissue interferes with the circulation. Nutrition of the tissue being thus cut off and the absorption of the inflammatory products by the lymph channels made impossible, death of the tissue must necessarily set in sooner or later. At the same time the inflammation being cut short no new inflammatory products are thrown out, and those already existing undergo retrograde metamorphosis into cheesy degeneration.

This same pathological picture is found in every organ of the body and is but slightly modified by the histological differences of the tissues in which the tubercle is deposited. Thus, for instance, in the mucous membrane of the larynx it is the glands and follicles which furnish the proliferating epithelium and because the capillary network is spread over a much larger area than is possible in the thin alveolar walls of the lungs, death of the tissues by obstruction of the circulation, *i. e.*, ulceration occurs in spots while the surrounding tissue is still in a state of inflammation.

The ultimate result of pulmonary tuberculosis as we all know, is a rapid breaking down of the lung tissue and death of the individual within a few months from the onset of the disease. There are, however, a few cases in which the deposit of tubercles takes place in a very limited portion of the lung tissue only, and which will, under favorable circumstances remain isolated, becoming encysted by a wall of fully formed connective tissue the result of a higher grade of inflammation, to which the tubercular process has given rise in the surrounding tissue. There are also some few cases in which a limited number of tubercles are deposited in various portions of the lungs and which by their presence give rise to an inflammation followed by consolidation and decay of the lung tissue. This consolidation differs, however, from that produced directly by the tubercular process, and is identical with the pathological process seen in phthisis.

The outbreak of tubercle in an organ or throughout the body is, in my opinion, not dependent upon the introduction into the system of infectous material which originates external to it, but is caused by the dissemination of infectious material existing within the system, though it may have remained latent for a long time. This infectious material, however, can only be found under a peculiar condition of the system in the form of cheesy deposits, and this condition is known as scrofula. Scrofula existing as it does in certain animals and individuals of the human race depends, according to Dr. Formad, whose theory seems plausible, in an abnormal richness of cellular elements and narrowness of the lymph spaces of the connective tissue. If, then, under these circumstances an inflammation occurs the narrow lymph spaces become clogged by the inflammatory products unusually rich in cellular elements which, undergoing retrograde metamorphosis become cheesy deposits instead of being carried off or becoming organized as is the case in the normal condition of the tissue. A cheesy deposits of this kind may remain dormant in the organ in which it has been formed for an indefinite period, but if by any chance portions of it enter the lymphatic circulation, tuberculosis is the result.

The transmission of tuberculosis from one person to another which is occasionally met with, can easily be accounted for by the facts that the person becoming infected was either scrofulous from the start, although the diathesis may not have shown itself prior to the deposit of tubercle or, what is more likely, the early history of glandular enlargement, and so forth, has been overlooked and the fatigue and privation consequent to the nursing of the tubercular patient has given the necessary impetus for the production of the disease; or else the vitiated atmosphere, fatigue, loss of sleep, and the mental strain and anxiety prior to and after the death of a husband or wife affected with tuberculosis, reduces a formerly normal constitution to a scrofulous one and renders the faithful nurse liable to contract the disease.

Transmission of tuberculosis from a patient to a nurse or attending physician, where the latter are not exposed to the evil effects of bad sanitary surroundings and where they are not scrofulous, has, I think, never been observed. In regard to the causation of the disease by the introduction of bacilli or bacteria into the system of healthy, non-scrofulous persons, I am not prepared to express an opinion, since the sub-

ject has as yet not been sufficiently investigated, and the experiments on animals are, to my mind, not conclusive enough to warrant the acceptance of the bacillus theory of the causation of tuberculosis. Scrofula usually is inherited, but it may be acquired, and is then caused by anything which lowers the vitality of the system at large, and particularly diminishes the hysto-genetic power of the products of inflammation.

Phthisis, on the other hand, may be defined as a progressive consolidation of the lung tissue, due to a more or less localized inflammation, affecting primarily the apices and undergoing retrograde metamorphosis. Phthisis is an inflammatory disease. Histologically considered, this consolidation of the lung tissue consists of an infiltration of the alveoli by inflammatory products, and exudation from the blood-vessels containing a number of leucocytes. Under the microscope it closely resembles the alveolar contents seen in catarrhal pneumonia; that is, it shows a fibrinous structure, intermingled with granular débris, red and white blood corpuscles. This infiltration begins to soften and undergo a sort of mucoid degeneration, when the epithelium of the alveolar walls proliferates. The epithelial cells, on account of a want of vitality, instead of multiplying by division, simply increase in size, and becoming detached, intermingle with the contents of the alveoli, filling them completely. They also undergo degeneration, so that they are soon not recognizable as cells. At the same time, a small-celled infiltration occurs in the alveolar walls and in the interlobular connective tissue, which, possessing a certain amount of hysto-genetic power, changes into a low form of fibrous tissue. This infiltration is noticed also, very early in the disease, in the peri-bronchial connective tissue. The macerating influence of the semi-fluid contents of the alveoli upon the epithelium soon denudes the alveolar walls of their protecting covering, while the pressure of the interalveolar infiltration upon the capillaries interferes with circulation, without, however, obstructing it entirely, and thus the first step toward destruction of the lung tissue by ulceration is taken.

The gradual breaking down of the interalveolar tissue merges the contiguous air vesicles into one, and a cavity is formed, which may or may not be surrounded by a wall of newly formed connective tissue, the formation of which depends upon the amount of inflammation excited in the contiguous lung tissue by the ulcerative process, and also upon the amount of hystogenetic power possessed by the inflammatory products. If, in the progress of decay, a larger blood-vessel is opened, a hæmorrhage is the result. After a time, the interlobular and peribronchial connective tissue is largely increased in thickness by a deposit of newly formed fibrous tissue, which gives rise to an alteration of the circulation in the bronchial mucous membrane, causing first inflammation, with proliferation of the epithelium on the surface, as well as in the glands and follicles, and later anæmia by pressure upon the capillaries, and often ulceration. There are, however, many cases in which, by proper nourishment and better oxygenation of the blood, the hystogenetic power of the inflammatory products is increased, while the alveoli are evacuated of their contents by expectoration, and the consequence is an isolation of the cavities by a strong wall of connective tissue, and the formation of fully formed fibrous tissue in the interalveolar and interlobular connective tissue, which formative process tends to cut short the retrogade changes in the lung tissue.

The different forms and stages of phthisis, as they are recognized and described by some authors, are merely differences in the degree of the inflammatory process, or in the extent of the retrograde change.

Phthisis is produced by a peculiar condition of the system at large, which may be designated as impaired vitality, and by a peculiar predisposition of the lung tissue to inflammation, which may be termed weakness of the lungs. Both these conditions may be, and mostly are, inherited, but in many cases they are acquired. The children of parents who are phthisical or syphilitic, have been drunkards or suffered from a cancerous disease, inherit a lowered vitality, not necessarily scrofula, which shows itself in a want of hysto-genetic power of the inflammatory products, and also in a weakness of the lungs and upper air passages, predisposing them to chronic inflammation.

Insufficient or inappropriate food, want of exercise and of fresh air, long continued mental strain, peripheral nervous irritation, and acquired syphilis, are among the most potent factors which will produce this same lowered vitality of the system and its histological elements in individuals who have not inherited this peculiarity. Thus, for instance, uterine disease will frequently give rise to phthisis, by peripheral irritation and the consequent lowering of the vitality.

Phthisis will be developed in other cases by the prolonged sojourn in badly ventilated rooms or workshops the air of which is laden with dust or noxious gases, and thus we find that shoe-makers, carpet-weavers, cigar-makers, and operatives in cotton mills supply a very large percentage of all cases of phthisis in large cities. Obstruction of the nose by hypertrophic nasal catarrh or by tumors, also may, and often does, produce phthisis in a considerable number of cases, as I have had occasion to observe, because if the nasal cavities are obstructed, and respiration has to be carried on through the mouth, the lungs are not sufficiently expanded, and the inadequate oxygenation of the blood gradually lowers the vitality of the system. And finally, we see phthisis developed often during the convalescence from exhaustive diseases, such as typhoid fever, diphtheria, and others, if the lung tissue is exposed to an injury giving rise to inflammation.

However, both in the inherited and acquired predisposition, it is necessary that an injury should be inflicted upon the lung tissue before the inflammation can be set up. This injury usually consists in exposure to cold—that is, a chilling of the surface of the body; but other factors are also frequently the cause of the initial inflammation, as, for instance, the inhalation of irritating vapors, or of air charged with particles of solid matter, the sucking into the air vesicles of purulent mucous from the bronchioles in

a state of inflammation, traumatic injury to the chest walls, the formation of gummata in or around the lungs, and others of a like nature. But these causes, are not of sufficient potency to produce phthisis in subjects of vigorous constitution, or cannot produce much destruction of lung tissue if the vitality of the system be elevated.

Thus it will be seen that proper hygienic measures are capable of not only preventing the outbreak of phthisis in subjects predisposed to it by heredity or otherwise, but also are liable to cure phthisical patients in which the destruction of the lung tissue has not gone too far.

If, on the other hand, the process of destruction has gone on for a long time and has involved a large portion of the lung, the system gradually loses more and more of its vitality and finally becomes scrofulous by the narrowing of the lymph-spaces in the connective tissue. When this point has been reached tubercles appear in the affected lung tissue and bring about an early fatal termination of the disease. But be it understood that the low-type chronic inflammation has existed long before the tubercles have made their appearance and it alone, without the intervention of the neoplasm, may cause death.

It is this complication and intermingling of the two diseases which has given rise to the confusion of terms existing in the literature on the subject of consumption, for we find almost everywhere the terms phthisis and tuberculosis usèd as synonyms.

The laryngeal manifestations of phthisis are so varied and manifold that it is difficult to give a general idea of their clinical features and pathology. and it will, therefore, be more comprehensive to describe them seriatim. They are never seen to occur prior to the disease of the lungs, although the latter may be so slight as to escape detection by the ordinary methods of diagnosis, and the laryngoscope then furnishes the earliest evidences of phthisis. Those lesions of the larynx giving rise to subjective symptoms occur quite frequently, that is, in about 33 per cent. of all cases, while certain changes in the shape of portions of the larynx and in the color of the mucous membrane, not noticed by the patient, are seen very early in the disease in the great majority of cases. These latter changes consist in an ashy paleness of the mucous membrane which spreads to the pharynx, palate and mouth and is different from the anæmia seen in other diseases. This pallor usually persists throughout the course of the disease, but there are cases in which here and there spots of heightened color and patches of ecchymosis are seen, usually in those portions of the larynx which are subject to increased and long-continued irritation, such as the free margin of the epiglottis, the inner surface of the arytenoids, the vocal cords, etc. No tumefaction of the tissues, or ulceration, or even inflammation, being present, this condition does not give rise to subjective symptoms, passing unnoticed unless the laryngoscope be used as a means of diagnosis of the lung trouble.

The pathological process in the mucous membrane giving rise to this particular pallor I am not prepared to describe, not having had an opportunity to examine microscopically the tissue of a larynx exhibiting this condition only.

Frequently this anæmia is accompanied by tumefaction of certain portions of the larynx, a swelling which somewhat resembles the œdematous distension of the mucous membrane met with in acute and chronic laryngitis, for which it may be mistaken. The most common seat of the swelling is the tissue around the arytenoid cartilages, extending upward into the ary-epiglottic folds. It thus assumes a peculiar shape resembling a pear, from which resemblance the term "pyriform" swelling has been applied to it. The tumefaction affects either the tissue around both cartilages in an equal degree, that is, it is bi-lateral, or one side is more swollen than the other, and if this is the case, the greatest amount of intumescence is always found on the side of greatest lung implication. These pyriform swellings at times become so large as to interfere with the approximation of the vocal cords, and to encroach upon the lumen of the laryngeal cavity.

Less frequently and usually later in the disease the tissue covering the upper portion of the posterior aspect of the epiglottis also becomes tumefied to a considerable extent, and gives the organ a peculiar rolled up shape resembling in the laryngeal image a grub worm. But the swellings are not confined to the localities mentioned, and may occur in any portion of the larynx. Thus there are cases in which the arytenoid cartilages, the epiglottis and the ventricular bands, and probably also the vocal cords are in such a state of intumescence as to prevent a view of the vocal cords and encroach to such an extent upon the lumen of the laryngeal cavity as to necessitate tracheotomy to prolong life. Under the microscope these swellings are seen to be due to an extensive infiltration into the sub-mucous connective tissue of small grannlar lymphoid cells. The normally numerous glands are also invaded by the infiltration and deposit of a fibrous tissue around the accini and ducts. The lnmena of the ducts and of the accini are filled with unnsually large prolypherated epithelial cells, which, in many instances, have undergone retrograde changes leaving the ducts and accini filled with a granular débris. The peri-vascular connective tissue is considerably increased in thickness and the lymphapatics filled with lymphoid cells. A certain amount of serous exudation is also present, which is demonstrated by the fact that a considerable shrinkage takes place in the size of the swellings when the specimen is kept after removal from the body for a few hours before immersing it in the hardening solution. Nowhere are miliary tubercles or cheesy deposits to be seen in the tissue. In many cases no other manifestation than these tumefactions are noticed, and in a few instances have I seen the pyriform swellings disappear under the appropriate treatment together with the healing of the affected lung. There is another class of cases in which either no tumefaction of this tissues occurs or in which it is very slight and spread over a larger surface. In these ulcerations begin to appear in various portions of the larynx which are in appearance like the shallow erosions of catarrhal inflammation of the larynx. They usually are situated at the free margin of the epiglottis, in the inter-arytenoid space,

and on the laryngeal face of arytenoid cartilages, less frequently on the ventricular bands, ary-epiglottic folds and the vocal cords.

In post mortem examinations I have often found them in the trachea and bronchi and usually occupying in the former that side on which the greatest amount of disease in the lung was found. In the larynx their shape varies with the position which they occupy, being linear on the vocal cords, ovoid on the ventricular band and oval or roundish on the epiglottis. Their tendency is to spread on the surface of the mucous membrane, but not to invade the deeper structures, except where the excretory ducts of glands become involved when a pit-like depression in the bed of the ulcer can be seen. A grayish white, moderately stiff, excretion covers the surface, and they are very senstive to irritation, giving rise to pain in deglutition and phonation according to their situation. Under the microscope the tissue does not present any marked difference from the picture presented by the tumefactions, except that the small-celled infiltration is more denseiy crowded around the ulcers and the epithelium at their edges is turbid and granular. When a gland duct is implicated, its epithelium has disappeared and it is seen to be filled with granular débris. The lymph-spaces are occluded by cellular elements near the edge of the ulcer, and capillaries and smaller vessels almost filled with prolypherated endothelium.

In other cases still we see projections resembling exhuberant granulations in the inter-arytenoid space often reaching into the laryngeal cavity, thus interfering with the approxiation of the cords and giving rise to aphonia. These neoplasms may remain unchanged for a considerable length of time to be destroyed by the ulcerative process towards the end of the disease, or they may disappear spontaneously like papillary growths on the external integument of the body are prone to do. The only specimen of a growth of this kind which I obtained by evulsion with the forceps, showed under the microscope its epithelial origin, being identical with the tissue of an ordinary papilloma, except that the connective tissue stroma was densely infiltrated with small lymphoid cells so as to be barely distinguishable except by teasing the sections.

These manifestations of phthisis in the larynx remain often unchanged for along time, or make but little progress as the lung disease advances, or they may disappear altogether under appropriate treatment, even before the disease in the lung tissue has been fully arrested in those cases which terminate in recovery. But as soon as tubercles are deposited in the lungs the laryngeal lesions also develop a tubercular character, and a rapid change for the worse sets in.

The same ætiological factors which give rise to the lung disease, viz., the lowered vitality of the system, the want of hystogenetic power of the inflammatory products and the predisposition to inflammation or weakness of the organ also cause the laryngeal implication, and if any injury by cold or otherwise starts an inflammatory process in the laryngeal mucous membrane, it will be of a phthisical type. The continuity of tissue between the alveoli of the lung and the mncous membrane must also be taken into consideration as an ætiological factor. But I do not believe with some authors that the irritating influence of the expectoration from the lungs can give rise to the erosions or ulcerations seen in the larynx, as it does not become inspissated, and therefore cannot act long enough to destroy the epithelium. These ulcers are rather due to mechanical injuries depriving a small portion of the mucous membrane of its epithelium which is not regenerated. And now let us glance for a moment at the picture presented by the laryngeal lesions in tuberculosis, which has been so admirably delineated by my friend, Dr. J. S. Cohen, in an exhaustive paper read before the society a year ago, which I am sorely tempted to quote verbatim, were it not for want of space and time, and I must therefore confine myself to mentioning only the salient points of contrast as they have presented themselves to my observation. The laryngeal lesions in tuberculosis giving rise to subjective symptoms are much more frequent, occurring as they do in about 53 per cent. of all cases. The primary deposit of tubercles in the larynx, although not usual nor frequent, has been observed in several cases, one of which came under my own observation. The mucous membrane is usually of a livid red color, which is intensified around the ulcerations. The tumefaction of the tissue is more circumscribed, and occurs more generally in the anterior portion of the larynx. The ulcerations are deeper, have raised and serrated edges and cause often great destruction of tissue. Pseudo papillary neoplasms are never seen, and true miliary tubercles as well as cheesy deposits have been demonstrated in the tissue of the larynx. At the same time, complete occlusion of capillaries and lymph-spaces in the neighborhood of the ulcerations may be seen under the microscope. And finally, the existence of these lesions is but a short one, for they depend upon the deposit of tubercles in large numbers, and rapidly progress toward the fatal end.

As in tuberculosis of the lung or general tuberculosis, laryngeal tuberculosis is due to scrofula.

And now let us briefly consider what pathology has to teach us in the prognosis and treatment of these diseases. Tuberculosis from the start is a fatal disease except in the rare cases in which the deposit of the neoplasms is so limited in number and in which they become encapsulated, the poison being antagonized by considerable power of the hystological elements of the tissues and the inflammatory product to form new tissue. Treatment avails us nothing, for I will ask have we time to so improve the general health and to change the anatomical condition of the connective tissue to prevent the ulcerative process and have the resulting inflammation terminate in resolution? Clinical experience answers "No" to this question. All we can do in these cases is to alleviate the suffering and prolong life as long as possible and make it endurable. We can, however, prevent the outbreak of the disease by preventing the formation of the initial infectious material and by changing the scrofolous character of the system of our patients in early

life. And further we can use our influence as medical advisers of families to prevent the intermarriage of blood relations, of syphilitic and of scrofulous persons. The prognosis of phthisis on the other hand is not nearly as bad, and we may reasonably hope for recovery if the proper treatment be instituted early in the disease.

Since the low type of inflammation is dependent upon a lowering of the vitality from any cause, we must direct our efforts to elevate and strengthen the constitution by proper feeding and healthful exercise in the open air, and prevent the too rapid cell death by the judicous exhibition of alcoholic stimulants. Digestion as a rule being impaired we should exercise great caution in giving drugs and especially cough syrups. At the same time we must strive to evacuate the alveoli of their contents, which by entering and remaining in the bronchioles irritate the mucous membrane and give rise to the frequent and distressing cough. This may be accomplished with marvelous success by forcible inhalations of warm and moist vapors, not under pressure, however, for as has been lately demonstrated the lung tissue is not air tight when undue pressure is exerted upon the alveolar walls for any length of time, and air will enter the blood vessels causing instant death. By thus removing the irritant from the bronchial tubes the cough is alleviated much more quickly and more satisfactorily than is possible with expectorants acting through the stomach. The treatment of cavities in the lung tissue, as instituted by our illustrious member, Dr. W. Pepper, and its success by injections and drainage are too well known for me to dilate upon here.

As regards the lesions in the larynx, only the mildest possible applications in the mildest possible manner should be employed, for be it remembered that mechanical injury will give rise to the ulcerations, and therefore all harsh treatment with the probang or brush should be avoided.

The treatment as thus outlined has proved eminently successful in my hands, as well as in those of others, and I am happy to be able to say that there are numerous cases of cured phthisis in this city at the present time. But even the best and most successful treatment is not equal in efficiency to the prevention of the disease; and, as in the case of tuberculosis, we can do far more good by teaching our patients to observe hygienic laws and to elevate the vitality of their system, thus preventing the possible outbreak of the dread disease. We should also be very careful to search for and remove any source of irritation which might ultimately produce phthisis.

To sum up my remarks, I will state that, in my opinion, *tuberculosis* is produced by infectious material entering the lymphatic circulation which does not originate outside of the body, and that the disease is incurable. Further, that *phthisis* is due to a low grade of inflammation of the lung tissue, and is curable in the earlier stages That both tuberculosis and phthisis give rise to laryngeal complications and lesions which are distinct in character, and differ from each other both in their clinical features and in the pathological changes of the tissues. And finally, that both diseases, although totally different in their ætiology and initial pathological lesions, may co-exist and produce each other, and that the indiscriminate use of the terms tuberculosis and phthisis in our literature must necessarily mislead the student, and make careful investigation extremely difficult.

THE TREATMENT OF PSORIASIS.

BY ARTHUR VAN HARLINGEN, M.D.

[Read before the Philadelphia County Medical Society, October 17, 1883.]

Psoriasis is one of the commoner skin diseases met with in this country. The statistics of the American Dermatological Association show that it occurs in the proportion of about 6 per cent. in all diseases of the skin encountered. Daily experience would seem to indicate a still more frequent occurrence, because the affection is a disfiguring and annoying one, and therefore patients are more inclined to seek relief, and also because it is a stubborn disease and greatly prone to relapse. The history of a single case will often extend over many years, and bring it under the observation of a number of different physicians.

It is because of the comparative frequency with which psoriasis is met and its stubborness to treatment, that I have selected it as the subject of my remarks this evening. Having had a good deal of experience in the treatment of the commoner forms of the disease, it is my intention to confine myself chiefly to the consideration of such remedies as have come under my own observation and use, only touching incidentally on others.

The object of treatment in psoriasis is the removal of the eruption as it exists upon the skin. We cannot hope with any degree of certainty in any given case to prevent a recurrence of the disease, or, if you please, a relapse. For the drug has not yet been discovered which will surely take away all tendency to the recurrence of psoriasis, and whoever promises a cure, in the wider sense of the word, to his patient, will in a very great number of cases find that he has been too sanguine. Fortunately, however, a certain number of patients do seem to recover. I do not know what has been the experience of others in this respect, but I have patients who have been under observation three, five, even eight and ten years without relapse. Such cases are, unfortunately, few.

Preëminent among the internal remedies which are useful in the treatment of psoriasis, is arsenic, which may be justly called a specific in this disease. I think I am not asserting too much when I say that eight out of ten cases of psoriasis of average character and severity, shall do better under the use of arsenic than with any other remedy. I prefer Fowler's solution given in the average dose of four minims thrice daily. I think this solution is often prescribed in too large doses, and I am sure the dose of five to ten minims, as given in the books, is too large for ordinary use. Most patients bear a four minim dose very well, but there are idiosyncrasies. I have sometimes been obliged to limit the dose at the beginning to one minim in cases where subsequently such toleration has been established that twelve minims have been taken with impunity. However, four minims

is a good dose to begin with, and if the effect does not begin to show itself within ten days or two weeks the amount may be gradually increased. Fowler's solution should never be given to the patient in a vial with the directions to drop out the requisite number of drops. The patient is apt to make a mistake, vials of different sizes may pour out more or less in each drop, and there is always danger in leaving a half empty vial of poison about the house. The solution is better given mixed with water, or with wine of iron or other convenient vehicle.

The effect produced by arsenic upon the eruption of psoriasis is first, in diminishing the quantity of epidermic scales thrown off, and then in preventing the appearance of new lesions. The patches gradually lose their scaliness, begin to heal in the middle and disappear little by little. It must be remembered, however, that arsenic is a slow acting remedy, and its use should be continued through many months to get the best security against relapse.

The other liquid preparations of arsenic used in psoriasis are Pearson's solution of the arseniate of sodium, and Donovan's solution of the iodide of mercury and arsenic. I have used the former in a few cases without noticing any perceptible difference as regards efficiency between it and Fowler's solution. The solution of mercury and arsenic (Donovan's), I have employed in certain stubborn cases with good effect where Fowler's solution has seemed to fail. The existence of syphilis as the cause of the eruption in these cases having been excluded, I am at a loss to account for the apparently greater efficacy of the mixed treatment. The dose given was as much as ten drops, and although this solution is weaker in arsenic than Fowler's, yet I am inclined to the opinion that the conjoint administration of the two drugs, mercury and arsenic, was the cause of the good result rather than the increased dose. I should be inclined to use Donovan's solution in cases where Fowler's solution shall have failed.

The mixture of arsenious acid, black pepper and sugar of milk, known as Asiatic powder, and recently placed in the Pharmacopœia with the pepper left out, among the triturations, is of no particular value above the other preparations, and it is not so convenient of administration.

Hypodermic injections of solutions of arsenic have been employed in the treatment of psoriasis, but I have had no experience in their use.

Next in value to arsenic in the treatment of psoriasis, is iron. I commonly employ the tincture of iron in cases where arsenic does not seem indicated. There is one type of psoriasis which includes robust, rosy, well-nourished individuals, "the very picture of health." Such people have never been sick a day in their lives, or perhaps may have had slight attacks of articular rheumatism. Such patients do well under arsenic.

But there is another type in which the individual is thin, poorly nourished and perhaps somewhat anæmic. These are the cases which do well under iron, which is best administered in the form of the tincture of the chloride. With these two remedies, arsenic and iron, I usually succeeded in curing ordinary cases of psoriasis, adding in rare cases cod-liver oil to the use of the tincture of iron when debility is present. Of course local applications are employed at the same time. Of these I shall speak presently.

In addition to the internal remedies mentioned, quite a host of others have been employed from time to time. Such are tar, carbolic acid, copaiba, phosphorus, tincture of cantharides, tincture of maize, carbonate of ammonia, acetate of potassium and other diuretics; the alkalies, as liquor potassa and the alkaline mineral waters. Of these I have found alkalies and diuretics useful in cases when a markedly inflammatory condition of the skin has existed. The other remedies I have not employed, nor do I think the reports of their usefulness based on a sufficient number of facts, except in the case of tar, possibly, to make it worth while to try them.

Equally important with the internal treatment of psoriasis is the external management of the disease. It is, of course, desirable to remove the eruption as soon as possible wherever it may be situated; but when it is found upon the face, there is every reason to endeavor its cure by all means and in the shortest time. External and internal treatment should therefore be combined when practicable. The first thing to do is to remove the scales. This may be done by means of local or general baths, wet dressings, etc., or by inunctions with fats and oils, by the use of soap, or by the action of impermeable dressings of India-rubber or oil silk. When only a few lesions ars to be acted upon, a solution of salicylic acid in alcohol, one part to sixteen, well rubbed in with a sponge, will remove the scales very nicely.

The scales having been removed, the next thing is to apply such substances to the diseased patches as may most quickly modify the abnormal condition of the skin, and bring it back again to a healthy condition.

An innumerable number of applications have been recommended for this purpose, the most of which I shall pass over with only a mention. Such have been soaps and alkalies, citric and hydro-chloric acids, sulphur, iodine and mercury, alone and in combination, together with the various forms and preparations of tar, creasote and carbolic acid.

All of these remedies have their uses, and most of them, especially the tarry preparations, I have employed time and again in years gone by, and with moderate satisfaction. The introduction, however, of chrysarobin or chrysophanic acid some six or seven years ago, put quite a new face on the local treatment of psoriasis; and since then, with the aid of this and other later discoveries, we are able to work a much more rapid change in the appearance and condition of the skin in this disease.

As chrysarobin is perfectly well known to all here present, both as to its advantages and defects, I shall say but little about it in the ordinary form of its application, namely, as an ointment. When it first came out I tried it quite extensively, but its disadvantages seemed so great that I had already begun to restrict its use greatly in my practice, when a new agent appeared, which for every-day use has in my hands, un-

til very recently, almost entirely superseded all other local applications. I refer to pyrogallic acid.

I do not think that pyrogallic acid is by any means so well known as an application for the relief of psoriasis as is chrysarobin. If I may judge by the infrequency with which its virtues are mentioned in the journals (although I believe all recent text-books speak of it), it is not in general use. But it is, in my opinion, one of the very best remedies we have for the cure of cases of psoriasis of average severity. Employed in the form of ointment, of the strength of one-half to one drachm of the pyrogallic acid to one ounce of simple ointment, the effect produced by it is almost as rapid and decided as that brought about by chrysarobin, without the accompanying discoloration. A slight blackish staining is all that is produced, and the ointment can even be employed in the scalp without markedly discolorizing the hair, if applied cautiously. It is desirable. however, not to apply soap or alkalies at the same time, because this causes a more permanent and deeper stain.

Pyrogallic acid cannot be used in extensively generalized psoriasis, when large surfaces are affected by the disease, without a certain amount of danger from absorption, as indicated by strangury and olive-green or tar-colored urinary sections. With care, however, and the occasional suspension of the remedy for short periods, I believe this remedy could be employed even in universal psoriasis with good effect.

One more external application in psoriasis remains to be spoken of—namely, naphthol. This drug, a derivative of coal tar, was introduced into use several years ago by Kaposi, of Vienna, as a sort of substitute for carbolic acid. He recommends it very highly in psoriasis, in the form of ointment, about eighty grains to the ounce, and I have used it in this and other strengths, and also in alcohol and oil, with fairly good effect.[1]

Naphthol is not so active in its effect as chrysarobin or pyrogallic acid, but it is much more agreeable and is, I think, peculiarly well adapted for employment upon such parts as are exposed to the view, as the face and hands. Like pyrogallic acid, it must be used with caution over large surfaces, as absorption with toxic effects may be produced.

It remains to mention briefly two or three methods of application of these remedies which have recently been brought forward. The first of these is the treatment by medicated gelatine, which was introduced by Prof. Pick, the well-known dermatologist of Prague. My attention was first drawn to this by a pamphlet which Prof. Pick kindly sent me, in which he gave an account of his earlier experiments with medicated gelatines, but I have not as yet had an opportunity of testing this method of medication as I should desire. I may say, however, that the method does not seem to me calculated to prove convenient and popular in private practice. I had for some time been making some experiments in my service at the Polyclinic in the preparation of gelatines impregnated with chrysarobin and pyrogallic acid, but without much satisfaction, when Dr. Chas. L. Mitchell, the well-known pharmaceutist of this city, sent me some excellent preparations of his own, which seem to be perfectly adapted to the purpose for which they are intended. A bit of one of these gelatine sticks is cut off and placed in a water-bath, where it soon melts into a clear homogeneous fluid, which may then be applied to the lesions of the skin by means of a paint-brush. The advantages claimed are cleanliness and transparency. The coating of gelatine does not rub off on the clothes, and is therefore not so dirty as an unctuous application. A fresh coating can be painted on every day or two as the old layer wears off. The chief disadvantage of this method of treatment is that it requires apparatus which is not convenient to carry about, nor can the patient be trusted to employ it at his discretion. My own experience is that in psoriasis, at least, the gelatine applications are not active enough. I have not, however, used them with sufficient frequency to pronounce a positive opinion.

Recently a solution of chrysarobin in collodion has been recommended in the treatment of psoriasis by Dr. George H. Fox, of New York, and several dermatologists have confirmed his statements with regard to its efficacy. I have employed this preparation in one or two instances, but it has seemed to me so much less active than the chrysarobin ointment that I have not been encouraged to continue its use. It has one great advantage over the gelatine applications, however, and that is that it can be applied extemporaneously, and without the paraphernalia which must accompany the use of the gelatine.

A few weeks since a pamphlet by Prof. Auspitz, of Vienna, reached me, in which that distinguished dermatologist recommended liquor gutta-percha as a vehicle for the application of chrysarobin. I at once obtained a ten per cent. solution, or rather emulsion, of chrysarobin in liquor gutta-percha, and happening to have a case of psoriasis of the face and scalp under treatment, I gave some to the patient to apply once daily. The effect was so happy as to encourage me very much to hope that we have in this preparation the most convenient method of applying chrysarobin yet devised; and as chrysarobin is, after all, the most efficient local agent in the treatment of psoriasis yet brought forward, I have no hesitation in urging the trial of this preparation on any one who may have a case of psoriasis under treatment. It is to be noted, however, that the same watch must be kept upon the skin for fear of exciting dermatitis as when the ointment is used. Only when the liquor gutta-percha dries, which it does very quickly, there is little or no danger of rubbing the chrysarobin over the good skin, nor is there much danger, if any, of staining the clothing.

[1] In a communication read before the American Dermatological Association, last month, and published in the *American Journal of the Medical Sciences* for October I have given the results of my experience in the use of naphthol in various diseases of the skin, psoriasis among the number. I may refer to that paper for further details as to the action of the drug in this disease.

BLOOD-LETTING.

BY GEORGE HAMILTON, PHILADELPHIA.

In the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for September 22d, is an article entitled "Good Remedies out of Fashion," by Dr. C. T.

Hare, President of the Metropolitan Counties Branch of the British Medical Association, in relation to emetics and blood-letting.

In regard to the utility of emetics in the cases adduced there are probably very many who coincide with the opinions of Dr. Hare, while, in reference to the propriety of bleeding in the congestive conditions alluded to, and others of a similar nature, a vast majority of practitioners, including nearly all the younger, would, perhaps, withhold their assent. The signs of the times, however, seem to indicate that a beneficial change of opinion upon this subject is about to occur; and the writer cannot but express his gratification that another distinguished authority has added his testimony in favor of a practice that, abused as it may have been in past years, is likely to assume its true position as an not only useful, but indispensable therapeutic measure in the cases to which Dr. Hare has referred. The earnest, impressive injunction of Dr. H. is that the physician, in the dangerous conditions he refers to, will not lose time in the employ of means wholly inadequate to the emergency, but at once resort to that one measure which, in the practice of the most experienced physicians, has been proven to be more successful than all other agencies combined.

Following the example of Dr. Hare, a case in illustration will now be given. A man of 22 years, unusually muscular and strong, after a few hours of chilliness was seized with a most violent and protracted chill, and in a very short time great oppression and stricture of the chest, with extreme difficulty of breathing, ensued. Early the next morning the patient came under my care. He lay upon his back, gasping for breath to such a degree that, if the motion of a fan was suspended for a moment, he would, with difficulty, exclaim, "Fan, or I will suffocate!" Face pallid, tips of the ears and nose cold, the hands, feet and legs in the same condition, the nails livid, the pulse very feeble and frequent. Inexperienced and alarmed, Dr. Thomas F. Hewson, my preceptor, was called to the patient, and at once directed me to bleed; but, for several minutes, a few drops only of dark blood could be had; yet by placing the hand in hot water the blood began to flow, and soon changed to a more natural color; the pulse increased in strength and became slower, the pallor and anxious expression of the face were less marked, and the patient said he felt easier. The usual warm applications and a stimulating liniment were applied to the feet, and moderate portions of carb. ammonia and wine were prescribed. The abstraction, however, of the carbonized blood had already produced reaction, and no matter how violent this reaction, or subsequent inflammation might be, this condition would be infinitely preferable to the profound passive congestion that oppressed the heart and lungs, paralyzed the action of the brain and entire nervous system, and thus, momentarily, endangered the life of the patient. Dr Hewson, promising to return in the evening, said that this was by far the most strongly marked case of approaching pneumonia that he had ever seen; and now, strangely enough, after more than a fifty years experience, no such case has occurred in the practice of the writer. At the evening visit the whole aspect was changed; reaction was fully established, the pulse excited, gasping greatly diminished, expression of face less anxious. As the oppression of the chest, and now, for the first time, some degree of pain was complained of, Dr. Hewson, anticipating a severe attack of inflammation, directed the vein to be reopened, from which florid blood bounded out as if from the vein of a man in robust health. The subsequent march of the disease, contrary to what had been feared, was not as severe as some others coming under my notice. To bleed under the condition just stated would perhaps not be thought of by an immense majority of physicians, but would probably be derided or ridiculed; but neither derision nor ridicule can successfully confront irrefutable facts. But some may say in objection: Is it not a fact that the case adduced is, by your own admission and that of Dr. Hewson, exceptionally rare, and therefore of little practical importance? In answer, it must be admitted that cases of such violence are seldom met with, but many others, endangering life in a lesser degree, do occur, not only in pneumonia, but in several other diseases, sometimes ushering in the attack, oftener in the latter stage. In the destructive epidemics that ravaged Europe several centuries ago, the deaths would often occur so quickly that it was impossible to refer many of them to the violence of fever or inflammation; whilst the opposite condition, profound venous congestion, stifling, as it were, vitality at the fountain head, would readily explain the fearfully sudden mortality. Again, in the cholera of 1832, many of the slaves in Louisiana suddenly fell victims to the malignant nature of the disease, without the occurrence of vomiting or purging. In malignant intermittent, not very often seen in this country, death may occur so soon after invasion that no rational cause can be given other than that of profound congestion.

Physicians in this section of the country are, fortunately, not often called to cases of this character, but when they do occur the course to pursue is that so emphatically commended by Dr. Hare. In this connection the writer may state that nearly all who, for a few years past, have adopted and written upon this mode of practice, are found to occupy distinguished positions as practitioners, authors or lecturers. In a physiological and pathological point of view the cases in illustration, by Dr. Hare, perhaps more decidedly the case of the young man attacked with pneumonia, are of extreme importance. In disease, the greater the divergence from the normal physiological state, the more distinct, impressive and instructive is the pathological condition; and when, as in an ordinary case of pneumonia, where inflammation and fever may be violent, the contrast between this and the congestive abnormal is still more marked and instructive. The normal action of the brain, spinal marrow and nervous system depends, entirely, upon the stimulus of oxygenated, vitalized blood; and the physician who abstains from the abstraction of carbolized, in fact poisonous blood, must do so in ignorance of the real nature of the case, or from dread of the wide-spread sentiment in opposition to bleeding,

both in and out of the profession. Another class of cases of congestion is frequently seen, of an entirely different character, and occur under very different conditions. They are generally noticed in the latter stages of disease, in fever, inflammation, or in chronic affections; and whilst they may exhibit no startling signs of immediate danger, they are, doubtless, the final cause of more deaths than occur in the former class. As a rule, and by common consent, bleeding is totally inadmissible in these cases, unless done in the first stage of the disease, and the strength of the patient yet is unbroken.

It was not the purpose, nor is it within the scope of this paper to enter upon the subject of bloodletting in ordinary inflammation, and especially in pneumonia. The difference, or rather the antagonism, of opinion in regard to the treatment of this disease, and the conflicting statistical reports of success, based upon the use or neglect of the lancet, may not be regarded as complimentary to the profession. Inflammation and its attendant fever does not occur without a cause, a noxious agent; and hence, such inflammation and fever must be regarded, in tendency, at least, as conservative; and so long as inflammation does not become so violent as to threaten the integrity of tissue, and organs essential to life, there would appear to be no necessity for the abstraction of blood; whilst in cases of great intensity, unless reasons of special, imperative character forbid, blood should be taken at the earliest moment, and to such extent as the constitution and existing conditions will admit. The danger so often spoken of in opposition to bleeding sinks into insignificance compared with that resulting from intense, unrestrained inflammatory action. The ability of the constitution to bear great loss of blood is exemplified in the fearful condition to which women in abortion, or post-partum, are at times reduced, and from which they often recover with marvelous rapidity.

CATHETER BROKEN OFF IN PROSTATIC PORTION OF URETHRA--EXPEDITIOUS REMOVAL.

BY ARTHUR L. WORDEN, M.D., DES MOINES, IOWA.

I notice, in your issue for Sept. 15, the paper of Dr. Hard, in which he recommends a sharp, screw-pointed instrument for removing broken catheters from the urethra. This cut represents an instrument which once helped me out of such a difficulty without the patient even knowing what had happened.

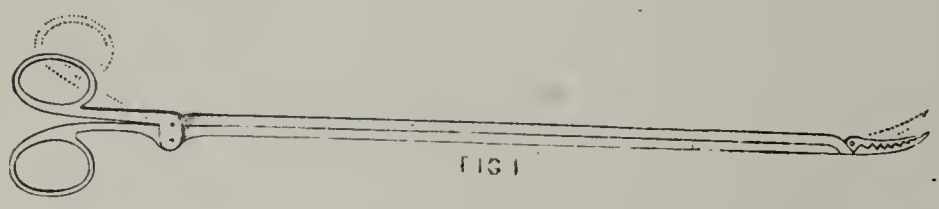


FIG 1

I had occasion to pass a soft rubber catheter, No. 11, into the bladder of a colored man. After drawing his urine and attempting to withdraw the catheter, imagine my dismay at having it break off in the prostatic region. Without mentioning the fact, I immediately passed the urethral forceps, and easily securing a grasp upon the broken end, at once withdrew the fragment entire.

On another occasion, I was unfortunate enough to have a pledget of absorbent cotton slip off my applicator and remain in the cavity of the uterus. Again my alligator urethral forceps came to my rescue, and I removed the foreign body without difficulty. The blunt end renders it as easy to introduce as an ordinary silver catheter. The cut represents the mechanism by which the greater part of the instrument works by a sliding motion, which in turn opens and closes the short alligator blades. With this instrument a firmer hold may be secured, and the fragment is not so liable to break. The compound silver catheters sometimes break off, and may be easily removed by the forceps—whereas the screw would be entirely useless. The greater safety of the former is obvious.

MEDICAL PROGRESS.

THE ACTION OF THE CONSTANT CURRENT IN ELECTRICITY APPLIED TO THE BRAIN ESPECIALLY AS CONCERNS THE EYE.—Dr. Gillet de Grandmont in the Recueil d' Ophthalmologie (August) after a series of experimental researches, reviews this subject at considerable length. In using this means for the relief of eye affections, he places the negative pole on the forehead near the termination of one of the branches of the tri-facial nerve, while the positive pole is placed near the superior conical ganglion of the sympathetic. The impression produced shows itself in various ways, viz., by flashes of light which are indicative of an irritation of the optic nerve and a corresponding disturbance of the retinal elements, and serves as a means of diagnosis to determine the degree of alteration of the retina. When, for example, an amaurotic does not see the brilliant blue light, but a feeble yellow glimmer, the prognosis would be far from favorable. The metallic taste in the mouth is not so easy of explanation, it has been supposed to be the result of a dialytic action upon the saliva; the iron taste has been supposed to be due to the decomposition of the elements of the blood containing iron, but this does not explain the copper taste. It is evidently due to a direct excitation of the lingual and glosso-pharyngeal nerves. The buzzing is due to an excitation of the auditory nerve. The dizziness is the result of a congestion of the encephalic centers. This appears only when the current is very strong, or when it is prolonged, and is very objectionable. Another objection to these strong and prolonged currents is the cicatrices which result on the forehead and neck from the destruction of tissue. The lowering of temperature which is shown on the use of a moderately strong current of electricity of short duration seems to negative the foregoing statement of congestion of the encephalic centers by a strong and long continued current; but this is explained by the action on the sympathetic and consequently upon the vaso-motor nerves. A current of feeble intensity stimulates the vaso-motors to the contraction of the vessels and lowers the temperature. A current of greater intensity or long continued exhausts and overcomes the excitability of the vaso-motors, and there is a vascular relaxation which admits of turgid-

ity and distension, congestion and sometimes even rupture of the vessels. An electrolysis also takes place in the aqueous humor, possibly also in the vitreous humor and in the crystalline lens, similar to that shown in the decomposition of water, when oxygen passes to the positive and hydrogen to the negative pole. This accounts for the direct diminution in amount of the aqueous humor, diminution in mass of the vitreous humor, and alterations in the crystalline lens, the latter being deprived of a portion of its water and showing a segmentation bordered by opaque lines.

The conclusions drawn are in effect that contiuous currents applied to the more profound affections of the eye are of great use in therapeutics; that they act upon the circulation of the ocular globe, and that they act powerfully upon the secretions of the humors of the eye. They are useful wherever it is desirable to influence the retino-choroid circulation, to stimulate the nervous excitability of the retina, or to modify the secretion of the vitreous body. That is to say that atrophy of the optic nerve, glaucoma and chronic irido-choroiditis can be so relieved. As regards the strength of the current the greatest benefit was obtained from using 4,6 or 8 Lechanché's,elements of medium size. Whenever a larger number of elements were employed cerebral disturbance always followed without a corresponding benefit in the affection itself. A descending electric current applied for from four to five minutes once on twice a week, sufficed to give satisfactory relief. Strong or long continued currents are useless and dangerous in producing indelible cicatrices and in producing congestions of the brain. Dr. Gillet de Grandmont has never been able to obtain any important modification by this means in confirmed cataract.

Every Patient His Own Case-Book. — Dr. Howard A. Kelly tells us, in the *Medical News* for October 13th, that he has for more than sixteen months, while a resident in the Episcopal Hospital, been in the habit of mapping out on the superficiaries of the body, in an indelible aniline color, the results of a physical exploration of the condition beneath. The markings remain fresh and clear from one to several weeks or longer, profuse sweating being the only symptom that is apt to obliterate them. He uses abbreviations to designate certain physical signs, the day and month being also recorded. The markings are made so prominent as to be legible over the largest of our clinical amphitheaters. This suggestion by Dr. Kelly may be enlarged upon to a very considerable extent. The clinical professor, it is true, would not have the opportunity of showing how a close and careful diagnosis is made, but he would be able to show a much greater variety of cases and have all his patients arranged like diagrams around him. In fever patients the daily record of the thermometer could be placed with the date on the borders of the axillary space, on the nates, or elsewhere, according to the mode of using it; what might be better still for this purpose, lines might be drawn in these situations to give the variations in the curve from date to date. Then in skin diseases, isolated points might be ornamented by recurring areola of boundaries and dates to indicate progress from papular to vesicular, pustular, maturative, etc., etc. Many a poor fellow would like to have a boundary to his phagedenic chancre to know if the thing is still spreading, or if it has begun to yield to treatment. Finally, it would give food and thought to the mind of the patient himself, too often left to its own resources. We hope these comments upon Dr. Kelly's suggestion will not be received amiss, as really he has given us what may be of great value within certain limits; but at the same time it does provoke one to thoughts irrelevant.

Ten Cases of Poisoning by Canned Meat. — The *Archives de Médecine de Pharmacie Militaires* for August 15th gives the report of the surgeon accompanying a company of a French regiment on the march in the East, where ten boxes of conserve of bouillie beef were opened for distribution, each box being served to ten men, making each man's ration one hundred grammes of the viand. The corporal in charge of the distribution found that in one of the boxes, while there was no bad odor, in place of the firm jelly overlying the meat, there was a white, slightly viscous fluid, as if the jelly had liquefied. This he threw away, only giving the meat itself. One hour after the meal the ten men who partook of it were all taken ill with nausea, alimentary and bilious vomiting, vertigo, violent colics followed by diarrhœa, the stools being fœtid and spumous, marked cramps in the thighs and legs, lasting four or five minutes, making all movement very painful. These patients were transferred to a hospital suffering from intense frontal headache with a sensation of throbbing at the temples. No heat of skin or febrile movement, pulse weak and slow but regular, respiration normal, abdomen slightly sensitive to pressure; urine scanty, cloudy, loaded with urates, but neither sugar nor albumen. The following day the symptoms were much less marked, cephalagia and want of appetite remaining, more of the patients were able to get up and walk about, the third day the symptoms had all disappeared and the fourth day they all reported for duty.

These men had eaten only of the canned meat and their usual bread ration; they had drank coffee, no alcohol, and water of a good quality; none of their comrades had suffered in any way. The preparation of the canned meats had been recent—June, 1881—and the date of poisoning was January 13, 1882, not more than seven months. The ten boxes or cans were carefully examined: one of them had a peculiar and decided fishy odor, like sardines in oil, while all the others gave the healthy odor of meat fat. This can was recognized by the corporal as having contained the offending substance. There remained a little of the jelly and meat at the bottom of the can; the jelly had a sharp, disagreeable taste; the meat though insipid was eatable. The can itself showed nothing out of the way — no fissure, the solderings were intact, and the interior showed the brilliant metallic lustre of tin. There was a careful analysis made of both the jelly and meat, but it revealed nothing. The microscope was not used. The

report made was to the effect that these preparations could undergo a change which, without modifying either the appearance, color or taste of the viand, would endow it with toxic properties; and the only sign existing was the fishy odor on the sides of the can, the simple liquefaction of the fat not being indicative of any change in the viand itself.

ON THE USE OF SALICYLIC ACID IN PRESERVING ALIMENTARY SUBSTANCES.—Prof. Bronardel (*Annales D'Hygiene Publique*, Sept.) has made a report on this subject in which he has embodied some very useful information. In 1880 the Consulting Committee of Public Hygiene in Paris concluded that salicylic acid was a dangerous substance, the sale of which should be submitted to the same laws as govern the sale of other dangerous substances, and that its use in preserving alimentary substances required toxic doses to make it available; therefore, the sale of such preparations should be interdicted. These conclusions were adopted by the Minister of Agriculture and Commerce, who accordingly issued a circular interdicting the use of salicylic acid in this way. His circular called forth so many protests, and gave rise to so much discussion, that the subject was again referred to this committe, resulting in this report of Prof. Bronardel.

The role and the mode of action of salicylic acid and of its salts in the animal economy is very little known. We who, as physicians, prescribe it daily, recognize its good effects in certain diseases, but we are incapable for establishing a theory for its action. We know that once introduced into the system it is eliminated by the liver and by the kidneys. The most partisans of this agent all recognize that diseases of these organs contra-indicate absolutely its administration. All have cited examples of sometimes mortal accidents, where the liver or the kidneys have failed to perform their duty as emunctories. In such cases the salicylic acid, not being eliminated, or being eliminated imperfectly, has accumulated in the system, and the dose prescribed each day has been added to its fellows. The elimination differs with the age; it is rapid in infancy and adolescence, slow in old age. Dr. Chauvet has shown that in the old people the elimination of a single dose of 4 grammes is not complete earlier than six days after its ingestion. Even when elimination is normal, the salicylic acid does not pass through the system without undergoing some transformation; we find salicylic and salicyluric acid in the urine. According to the researches of Feser and of Friedberger we find in the urine only 63 per cent. of the salicylic administered to dogs, and none in the feces. Prof. Bronardel administered 20 centigrammes of salicylate of soda dissolved in table wine at meal time for twelve days to three persons in good health, one aged 68 years, the second 46 years, and the third 23 years of age, all three being submitted to the same alimentation. With the two younger, the perchloride of iron did not detect salicylic or salicyluric acid in the urine. With the eldest, the violet color appeared slightly on the fourth day, then increased, and was quite intense for four days after the use of the drug had been stopped, and did not completely disappear until the seventh day.

So, administered even in small doses (20 centigrammes per day), the salicylate of soda does not undergo the same transformation in all persons, and in many it remains in the system for an indefinite period; which variation renders it impossible to indicate, even for persons in health, a minimum dose.

Many persons are exposed to serious danger by the daily use of salicylic acid or of its salts even in relatively small doses. These are cases where there is no elimination, or where the elimination is incomplete; from senile alteration of the kidneys, or from nephritis with albuminuria. Hospital records show that the frequency of albuminuria has more than doubled during the last twenty years. It is true that many cases of albuminuria are relieved, as in pregnancy where the presence of albumen is but temporary, and men have lived for fifteen years and longer after albuminuria has been detected as a prominent symptom. In view of these facts, Prof. Bronardel advised a maintenance of the laws prohibiting the use of salicylic acid or its compounds in the prevention of alimentary substances.

EXTRACTION OF A POMMADE POT INTRODUCED INTO THE RECTUM.—M. Maurice Pollosom (*Syon Medical*, Sept. 16), extracted a vessel of this description from the rectum of a man aged 72 years, who said he introduced it for the purpose of relieving pain in that region by pressure, and that it passed up and beyond his control. It had been in place for fifteen days; he had received medical advice but no examination had been made, and medicines had been given by the mouth; fecal matter passed in liquid form around the vessel. The borders of the vessel could be readily felt with the fingers and traction made upon them, facilitated by a depression about a centimeter in length upon the border of the vessel, but rendered difficult from the fact that a piece had been broken off before its itroduction. The sphincter also was very dilatable, indicating that this was not the first introduction of a foreign body. The muscular contractions of the rectum were very powerful and offered serious resistance, and the mucous membrane bordering on the rim of the vessel when pressed aside in one place doubled over the rim in another. Two pairs of forceps were applied at the broken portion, and while the mucous membrane was pushed away from the rim, traction was made and the vessel extracted. Slight hæmorrhage ensued but there was very little tearing of the mucous membrane. A large ball of fecal matter followed the extraction. The foreign body was an old glass pommade pot, cylinderical, six centimeters in length with a diameter of 47 millimeters, channeled externally; the broken portion represented one-fifth of the circumference. At eight millimeters of this circumference there was a circular projection of two milimeters which was very favorable for traction, and the projection was broken for one centimeter of its length. The patient was immediately relieved and left the hospital in thirty-six hours.

ON THE ACTION OF FREE HYDROCHLORIC ACID IN STOMACH DIGESTION.—Dr. N. Vogt has an interesting review of this subject in *Le Progrés Médical*,

September 15. As German writers of recent date have considered the absence of this as a free acid of great importance in semiology, Dr. Von den Velden by means of Kussmaul's pump obtained a certain quantity of matters contained in the stomach during digestion, and submitted them to the different reageants in order to detect the free hydrochloric acid. He obtained in tropéoline a substance of yellow color, which became red in the presence of mineral acids—organic acids not affecting it. In a case of typhus (?) he observed the disappearance of the free hydrochloric acid throughout the disease to return during convalescence. In simple dilatation of the stomach it was never wanting. In carcinoma it could not be detected. This could not be attributed to simple debility, because patients who, without carcinoma, had arrived at the last stages of marasmus still preserved the hydrochloric acid. It could not be the result of chemical action on the part of the cancerous secretions, because the light cases which were observed were cases of scirrhus and not ulcerated. In one case Dr. Von den Velden diagnosticated carcinoma in the absence of all other symptoms, which diagnosis was confirmed by the autopsy. In another case where all the symptoms of a neoplasm were present, the presence of the hydrochloric acid indicated that it was not carcinoma, and the autopsy confirmed his opinion. In one case where the liver was affected and the stomach healthy the acid was present.

In his researches he determined that the saliva which had passed into the stomach mingled with the food, did not act upon starch when free hydrochloric acid was present, and that this acid did not make its appearance for one and a half to two hours after the ingestion of food, thus confirming Lehmann's experiments. Consequently, he distinguishes two periods in stomach digestion: the first where the saliva continues to exert its influence over the starchy substances, and the second coincident with the appearance of free hydrochloric acid when the peptones are found in quantity.

These views have been combated with vigor. Ewald affirmed that the action of the reagent was masked by the presence of the albuminates of blood, etc.; that in a number of cases of carcinoma, the reaction of the hydrochloric acid was present; that the two periods of stomach digestion did not exist, and that the diastasis was simply diminished and not suppressed when the gastric juice became acid.

Von den Velden replied that the chemical agents of Ewald were not pure; that he did not admit a specific action to carcinoma, but he wished to discover in what special cases there was an absence of the acid.

Dr. Edinger confirmed the disappearance of the acid in two cases of amyloid degeneration of the mucous membrane of the stomach, and was inclined to consider it as due to an obliterating endartentis of the mucous arterioles. In his experiments he substituted for the Kussmaul pump, a modification of the old process of Reamur—by enclosing a bit of sponge the size of a nut in a gelatine capsule, suspending it by a thread, to be swallowed by the patient. In 30 minutes the capsule having been digested, the sponge was drawn out and the juice expressed from it and examined.

Dr. Uffelmann prefers the violet of methyl as the reagent to determine the presence of the hydrochloric acid. Dr. Edinger criticises this and prefers tropéoline. Sassesky has found, in nine cases of fever, that the hydrochloric acid disappears when the fever is accompanied with dyspepsia.

Dr. Vogt, in concluding his article, recommends a series of researches of this character to be conducted in hospital service.

Intestinal Occlusion due to a Biliary Calculus Wedged into the Rectum. (*Le Progrès Medical*, September 15).—This occurred in a woman 50 years of age. admitted to the service of M. Vulpian, at the Hotel Dieu. She died six hours after admission, the clinical history being very incomplete. There was great debility, feebleness of mental powers, facies expressive of suffering, temperature normal, pulse small and lowored, abdomen tympanitic, very much distended, the intestinal folds impressed on the abdominal walls, and pain on pressure of the abdomen. Marked dyspnæa and the patient declared that for four days the bowels had not been moved and very little urine had been passed. Catheterism found the bladder empty. On post-mortem examination all the intestinal folds were found to be distended, the distension extending to the superior portion of the rectum. At the junction of the superior and middle portion of the rectum a regularly shaped hard body was felt through the walls of the intestine, which was so wedged in as not to be moveable. On opening the rectum this was found to be imprisoned by the intestinal mucous membrane, which was tumorfied, but not ulcerated. The body was cylindrical in shape, 2½ centimeters in diameter and 1½ centimeters in height; it was composed of cholesterine. The whole of the large intestine was filled with fecal matter and two little calculi of cholesterine were also found. The gall bladder adhered to the transverse colon, where there was a very large ulceration putting the two cavities into direct communication. The ductus communis choledochus was little larger than normal, but contained no calculi.

The Ether Habit.—Under the title of "Etheromane," Dr. Sedan (*Gaz. des Hopitaux*, Sept. 15) gives some general references to the case of a young man, who, from the text, must have been nineteen years old when the observations were recorded, and who was for nine years in the habit of taking daily between 100 and 1,000 grammes of ether. When first seen by Dr. Sedan he was ten years of age—anæmia with a souffle accompanying the first sound of the heart, preserving nevertheless a very satisfactory general condition. He became one of the most promising students of the Lyceum, of a quick and brilliant intelligence, laborious and working with success. He confided to Dr. Sedan that he drank ether and that was the secret of his success—reasoned like a man and promised not to use the stimulant ex-

cept to assist the efforts of his intelligence. From that time he commenced increasing amounts of ether 20 to 30, 50, 80, 100 grammes a day, and as much at night in vapor, not drinking, not eating and leaving his ether intoxication to work out the most difficult questions in the higher mathematics. Getting up at night to obtain ether from pharmacies and imploring his parents to obtain it for him, medical advice failed to break up the habit. He consumed 900 grammes in one day, for the most part by the mouth. He has been said to have taken as much as one liter. And so this puny youth with a very feeble constitution indulged himself to this extent without any immediate disturbance, dying of mitral insufficiency which had developed itself gradually during a considerable period of time. During the last year of his life he used both ether and morphia subcutaneously.

THE CONSUMPTION OF HORSEFLESH IN FRANCE.—The municipal statistics of the city of Paris show that in 1881 the Parisians consumed 9,300 horses, and 400 asses or mules, which amounts to about 2,000,000 kilogrammes of meat. This animal is essentially herbinorous, and no noxious element is elaborated in its animal economy; whilst its organic resistance to disease is such that out of 3,000 horses which were cut up, M. Pierre, a well-known veterinary surgeon, did not find one in which the viscera showed any trace of morbid lesions. Like veal and young beef, the flesh of a young horse is white, and its nutritious qualities are in direct relation with the age of the animal which furnishes it; but when the colt is three years old, its meat, already deep colored, is very nourishing. When the horse has attained full age its flesh contains, in a maximum quantity, all the nutritive principles which are necessary. Liebig and Moleschott have pointed out that horseflesh contains more creative—that is to say, more albuminous matter—than oxbeef, which makes it largely nourishing. It has, in fact, been demonstrated that four kilogrammes of horseflesh are as nourishing as five kilogrammes of beef. The color is not displeasing, nor is the smell unpleasant; and its use in the treatment of diseases for which raw meat has been recommended, does not present the inconveniences which are often met with in the raw flesh of beef or mutton; in fact, every day large numbers of oxen, cows and sheep are killed which are known to be diseased, and of which it is feared to lose the sale. This can never be the case with regard to the horse, for most horses used for food are sent to the slaughter-house simply because they have become old or incapable of working, or because some accident has disabled them. —*British Med. Journal*, Sept. 15.

METHOD OF RELIEVING THE IRRITATION CAUSED BY CONTACT OF THE EYELASHES WITH THE EYEBALL IN SIMPLE OR SENILE ENTROPION.—Dr. Charles Bell Taylor has a wood-cut in the *Lancet* of September 29, illustrating a steel clip which seizes the eyelid in such a manner as to at once relieve inversion, and he affirms by wearing the instrument a short time the patients are frequently cured.

SYMPTOMS OF CHRONIC CEREBRAL HYPERÆMIA PRODUCED BY A FOREIGN BODY IN THE AUDITORY CANAL.—Dr. Pasquier, in the *Bulletin Médical du Nord*. (August), describes the case of a peasant woman 50 years of age, robust, free from previous disease, still menstruating, but not as regularly as previously, who complained of habitual pain in the head increased by noise, heat or bright light, making all work painful. It was accompanied by painful pulsations in the forehead. There was insomnia, and sleep troubled by fatiguing dreams; also a ringing in the ears; but the most troublesome symptom was vertigo, sometimes so intense as not to allow her to stand up, and accompanied with nausea and almost complete loss of consciousness. She felt this for the first time, she said, one day when an insect entered her ear, six weeks before. She thought the sharp pain experienced at the moment might have been the cause of the trouble, but the insect did not actually get into the ear; immediately after the accident a wing was taken out and the rest followed. Audition was good.

The physician who had attended the patient, treated her for cerebral congestion with mustard foot-baths, repeated purgatives and blisters, without benefit.

The auditory canal showed nothing abnormal. The anterior portion of the tympanum had undergone no appreciable modification, but back of the handle of the malleus, directly parallel with it and descending to the postero-inferior quarter of the tympanum, was a grayish, elongated body, presenting bright facets. It seemed to be directly attached to the membrane of the tympanum. The handle of the malleus and the neighboring tympannic membrane were also markedly vascular. Dr. Pasquier took this to be the elytra of an insect and tried to extract it by injections of warm water without avail; introducing the speculum anew, he found, at the bottom of the auditory canal a slender prolongation of a shaggy appearance which he took to be a part of a leg of the supposed insect; removing it with the forceps he found it to be an oat-grain, still covered in part by its numerous membraneous envelopes. I symptoms detailed completely disappeared on th extraction of the oat-grain.

BARNEY, JOHN W., M.D., was born in St. Johnsburg, Vermont, January 19, 1816, and was educated at the Caledonia Grammar School. He then read medicine, graduating at Woodstock, Vermont, in 1841. Afterwards, as this college was discontinued about 1860, he received an honorary degree from Dartmouth Medical College in 1873. He located in Lancaster, N. H., where he was in active practice until 1870, when he removed to Concord, remaining there until his death, March 4, 1883.

He was a member of the New Hampshire Medical Society, also a member and an ex-president of the White Mountain Medical Association, from which he was a delegate to and became a member of the American Medical Association in 1865.

G. P. CONN, M.D.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, NOVEMBER 10, 1883.

THE PEDICLE IN OVARIOTOMY.

Only a few years ago the operation of ovariotomy by abdominal section was considered one of the most difficult and hazardous of the capital operations. Except in the hands of a few experienced operators the mortality was so great that many were reluctant to admit the operation to the field of practical and legitimate surgery. Now, however, ovariotomy has been so greatly simplified and improved that it is one of the most satisfactory in results of all the more important surgical procedures. While the great change which has been wrought in the status and application of this operation is in great part due to those improvements which have so extended the field of abdominal surgery generally, much is attributable so the improved method of treating the pedicle. It is on this feature of the operation—the treatment of the pedicle—that such diversity of opinion and practice has been current, and to which we will direct attention.

When McDowell performed the first ovariotomy in 1809, he secured the pedicle by a ligature, and drew the ends through the lower part of the abdominal incision, leaving them outside in closing the wound. When Dr. Nathan Smith operated in 1821, the vessels of the pedicle were ligatured, the ligatures severed close to the knots, the pedicle returned to the abdominal cavity, and the wound closed completely. At a more recent date the ecraseur, the actual cautery and the galvano-cautery were used for dividing the pedicle; and the intra-peritoneal method was followed until Mr. Hutchinson, of London, introduced the clamp. By means of this instrument the pedicle was brought out between the lips of the abdominal incision and became extra-peritoneal. This method was at once adopted by Wells in England, and Atlee in America, and has been the popular and most generally accepted method. While Clay, of Manchester, and several well-known German operators adhered to the intra-peritoneal method, the clamp became famous in consequence of the brilliant results of Wells, Atlee and others. In the meantime torsion and Miner's method of enucleation were applied in the treatment of the pedicle, the latter being applicable only to special cases. With the advances steadily made in the various details of the operation by the able workers to whom it was entrusted, the mortality was reduced year by year. Among the noteworthy improvements should be mentioned the influence of the Listerian method of treating wounds upon the success of the operation. The greatest interest, however, continued to center upon the management of the pedicle. It was urged by Mr. Spencer Wells that the pedicle when ligatured and dropped into the abdominal cavity would slough off, thereby leading to a fatal result. In his work on Ovarian Tumors he gave conspicuous place to a fatal case in which an examination revealed the distal portion of the stump attached to a coil of intestine and lying in a pool of pus. The intra-peritoneal method had an able advocate in Dr. Tyler Smith, in England, and a brilliant exponent in Dr. Keith, of Scotland. In America the clamp was adopted very generally. In 1868, Spiegelberg and Waldeyer, of Breslau, made experimental investigations upon the changes which occur in the stump of the pedicle after its ligation and return to the peritoneal cavity.

By these experiments it was shown that the distal end of the stump does not die, but its vitality is maintained through its connecting band underneath the ligature until the sulcus made by the ligature is bridged over with lymph, and vascular connection permanently established. In 1872, Dr. Bantock, of London, exhibited to the Obstetrical Society the stump of an ovarian tumor from a patient who died from cancer one year after double ovariotomy had been performed upon her. On examination the hempen ligature was found to have been almost completely absorbed, the knot only remaining as a hard body about the size of a hemp seed and covered. In a paper recently read before the American Surgical Association, by Dr. J. Ewing Mears and Morris Longstreth, of Philadelphia, the results of extensive experiments upon the lower animals relative to the intra-peritoneal treatment of the pedicle were given.

These experiments cover the essential points observed by Spiegelberg and Waldeyer, and demonstrate some important facts bearing upon the choice of material for ligature. This subject is at the present time under investigation in the hands of Drs. Mears and Longstreth, and additional observations will be reported.

After Dr. Keith, the intra-peritoneal has doubtless been advanced in popularity most by Mr. Lawson Tait, of Birmingham, who has won the highest distinction by his skill in this department of surgery. Adopting almost exclusively the intra-peritoneal method of the ligature cut short, his results are shown in a published table of 101 consecutive cases of ovariotomy with three deaths. Mr. Wells, we believe, still adheres to the clamp, but in America the intra-peritoneal method has been very generally adopted, and the improved results show this to be one of the greatest advances in abdominal surgery. By the clamp the pedicle is drawn out of the wound and exposed to suppurating inflammation. It has been shown that pus is conducted along the pedicle into the abdomen, and thereby begets suppurative peritonitis. It seems that the prediction made some years since by our distinguished countryman, Dr. T. Addis Emmett, that the intra-peritoneal method with the ligature is destined to be the method of the future, is almost verified.

ETHICAL ADVERTISING.

DR. N. S. DAVIS:

Dear Doctor—I wrote you some days ago asking you to what extent and in what manner a physician might advertise himself under the Code of Ethics.

Your polite answer referring me to certain sections of the Code was duly received. In looking over the sections referred to I find that specialists are subject to the same rules as other members of the profession, and yet I find that in addition to the professional card of a physician, he may add thereto practice limited to diseases of such character as he may choose to designate; or he may say that he devotes certain hours of the day to certain specialties.

Now, does the Code say *to whom* a physician must hand such professional cards, or in what quantity or manner they may be distributed? Or, to be more explicit, does the Code intend to convey in letter or spirit that a doctor can print such a card and *circulate* it among the people for the purpose of increasing his business, or does it mean that he must scrupulously conceal the cards, and only now and then quietly and unobtrusively hand one to a brother doctor?

Furthermore, I would ask if a physician be allowed the privilege of printing and circulating such cards (and it is well known what cards are printed for) can not he, with equal right, print the same card on his letter-heads or put the same in medical journals, or for that matter, in the secular papers?

I am well aware of the fact that there is a clause in the Ordinances of the Code, which says, "*Resolved*, That private handbills addressed to members of the medical profession or by cards in medical journals calling the attention of professional brethren to themselves as specialists, be declared in violation of the Code of Ethics of the American Medical Association." And yet I can point you to-day to members of the American Medical Association who are guilty of this very thing, only in a different and modified form.

I refer you to a number of prominent men who are daily advertising in the various medical journals as *specialists* and calling the attention of their professional brethren to their facilities for treating special classes of diseases. In a journal now before me, I find a certain "Sanitarium" "for the treatment of nervous and mental diseases, and those addicted to opium and alcohol habit." It is further announced that "Years of experience, personal supervision, trained nurses and ample appliances, are the basis of our success." Two doctors sign their names to this "ad."

Following this advertisement comes that of another sanitarium, with about the same announcement, one physician being responsible for this.

Turning over, I come to another "Private treatment of" a certain class, by a well-known physician and a member of the American Medical Association. This gentleman announces himself as devoting special attention to a certain class of cases, and states that he has had years of experience.

It is needless for me to go on. Sanitariums, private homes, retreats, and every conceivable invention is used for the purpose of advertising, and this advertising is done for the purpose of influencing patients into the hands of physicians who are doing this advertising. I do not condemn it, on the contrary I want to do something of the same kind myself and for the same purpose.

I only submit these questions to you, my venerable and honored brother, for you to give me some light on the subject, and if such a course is proper and ethical in either of the several instances alluded to, depend upon it, I shall appear in due time as a vigorous advertiser. I can name my house a "private home," or a "sanitarium," and add in my proclivities and facilities for treating my specialties, and I will make money by the operation. By the way, please write me privately what you will run a two-inch card in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION one year for. Very sincerely yours,

C. A. BRYCE, M. D.

We copy the foregoing letter in the JOURNAL as designed by its author, and although the more important questions contained in it are as plainly answered in the editorial on the same subject in the 17th number of this journal as they can be, yet some further comments may not be unprofitable. First, the writer, in the beginning of his letter, fails to recognize the distinction between the provisions of the National Code of Ethics, and the reports and

resolutions adopted by the American Medical Association from time to time, relating to ethical subjects. Yet the distinction is an important one. The National Code proper was framed by a committee appointed by the same Primary National Convention of delegates from Medical Societies, Colleges, and other permanently organized medical institutions, that appointed another committee to prepare a constitution and by-laws for the formation of a permanent National Association. Both committees reported to the same adjourned Convention in which was gathered a more full representation of the several State and Local Medical Societies and colleges from all parts of the country. Both reports were adopted after full consideration, and the National Association created by the one, immediately adopted the other constituting the Code, and made its adoption by all other Societies one of the conditions of eligibility for membership in the National organization.

The Code of Ethics, therefore, possesses all the qualities of a fundamental or organic law created by national professional authority, and cannot be properly altered, amended, or added to, without such amendments or additions having been proposed in due form, and adequately published for at least one year before final action on them, and then such action could properly be taken only by a representative National organization; or, in other words, by the American Medical Association itself. But the resolutions concerning specialists reported by a committee and adopted by the Association in 1869, and the report of a committee on the propriety of a revision of the Code of Ethics adopted in 1874 are simply expressions of the views of the Association, and while they remain unrepealed may be regarded as authoritative interpretations or declarations, yet are subject to modification or repeal at any subsequent meeting by a majority vote.

And yet the language of the letter shows that its author, when he alludes to "certain sections of the Code," is actually referring to portions of the resolutions of 1869 and of the report of 1874, which were given in the leading editorial in the preceding number of THE JOURNAL. When he says: "I find that specialists are subject to the same rules as other members of the profession," he is referring to one of the resolutions adopted in 1869. When he adds, "Yet I find that, in addition to the professional card of a physician, he may add thereto, *practice limited to diseases of such character as he may choose*, or, he may say that he devotes certain hours of the day to certain specialties," he is referring to a part of the report adopted in 1874. But in this latter reference he commits an important mistake. There is nothing in the report alluded to which authorizes the physician to advertise by card or otherwise "that he devotes certain hours of the day to certain specialties." Neither does the Code of Ethics proper make any allusion to specialties or specialists in the sense in which those words are now used; and for the obvious reason that neither had any existence in this country when the Code was framed. It is plain, however, to every intelligent reader, that the national Code of Ethics recognizes no privileged or distinct classes in the profession, but that all regularly educated physicians enjoy the same privileges, and are under the same obligations to each other and to the community.

In regard to advertising, *all* are prohibited from issuing handbills, advertisements or private cards inviting the attention of those laboring under particular diseases. On the other hand, no one is prohibited from publishing or using a professional card as freely as he likes, simply announcing himself as a Doctor of Medicine, and giving his residence, office, and office hours. If, through ill health or other cause, he desires to limit his professional business to certain hours in the day, he can specity those hours on his card. Or if he desires to limit his practice to the treatment of any particular diseases, he can say on his card that "*his practice is limited*" to this or that class of diseases. For the reason that these are in the nature of self imposed restrictions, and not in any sense assumptions of special or superior professional attainments in certain directions. And if it should happen that some part of the community draw the inference that because Dr. A. limits his practice entirely to diseases of women, that he would be the more skillful in that particular direction, this possible advantage is balanced to his neighhoring practitioners by his public notice that he attends to no other class of cases. But if a physician puts upon his card or advertisement that *certain hours* are devoted to some special class of diseases, or that he gives *special* attention to certain diseases, or that he is an oculist, gynæcologist, etc., he both asserts a superiority over the general practitioner in the special direction indicated on his card, and implies to the public that all well educated physicians are not prepared to do good work in the same direction; and yet he gives no assurance, either to the public or the profession, that he will not be ready to attend to any other class of diseases as readily as the general practitioner. In other words, he retains all the privileges of a general practitioner, while asserting for himself special or superior skill in the treatment of certain classes of diseases.

It is just this unfair assumption of superior attainments in certain departments of professional work, and the privilege of advertising it to the public without relinquishing any of the privileges of the general practitioner, that specialists have been contending for ever since specialism, so-called, has had a recognized existence. But the consideration of other questions in the letter of our Richmond correspondent must be delayed until our next issue.

SOCIETY PROCEEDINGS.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY OF BOSTON, MASS., OCTOBER 10, 1883.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE. ALBERT N. BLODGETT, M.D., SECRETARY.

Meeting called to order at 8 o'clock, Dr. G. B. Shattuck in the chair.

There being no pathological specimens for exhibition, the first businessof the meeting was the reading of a paper [1] on "The Neglect of Ear Symptoms in the Diagnosis of Diseases of the Nervous System," by Dr. G. L. Walton, of which an abstract follows:

The study of the ear symptoms in nervous diseases has not kept pace with the general advance in neurology during the past twenty years, although otological research itself occupies at present a front rank in scientific progress.

It is not to be expected that the general practitioner should gain a thorough knowledge of the ear, although it is unfortunate that he should neglect it altogether, as in the exanthemata, where a little knowledge of otology would sometimes prevent, for example, hyperæmia from becoming a purulent inflammation, causing not only deafness, but more serious symptoms, by extension of the process. There is certainly no reason for leaving the ear entirely out of consideration in the diagnosis and scientific study of nervous diseases. The *eye* has been so carefully studied for some time among neurologists that the diagnosis of locomotor ataxia or cerebral tumor without ophthalmoscopic examination is the exception, and the symptom "blindness" without further explanation would be considered an absurdity. Although we can not assume that an equal amount of advantage is to be expected from the study of the ear, there is certainly much to be gained, and it should not be altogether neglected.

As an example of the practical value of adding otological to neurological study may be mentioned the recent investigations into hysterical deafness, which have shown that it has pathognomonic characteristics, the hearing through the bone disappearing first, then that for high tones. A knowledge of these characteristics is not only of value in diagnosticating the simple hysteria, but also medico-legally in examining the hysterical symptoms following railway and other injury, as recently pointed out especially by Dr. J. S. Putnam [2] and the reader. A case, has, however, been recently reported by [3] Landau and Remak, in which left sided hemiæsthesia of hysterical origin was accompanied by deafness on the opposite side. No examination of the ear was made and the hearing was only tested by the watch, and that only in the air, so that the right sided deafness may as well be attributed to middle ear disease, for example, as to hysteria, though no conclusions at all can be drawn from such incomplete evidence.

A systematic review of published cases in German, French, English and American journals show that while the eye is rarely, the ear is generally left out of consideration in diagnosticating cerebral disease. The cases in which the ear is neglected may be classed as follows: (1) Those in which no note whatever is taken of the condition of the hearing, although the presence or absence of deafness would be of diagnostic value; (2) cases in which deafness is mentioned as a symptom in nervous disease without sufficient examination to exclude disease of the ear itself. The first is by far the most numerous class and includes, perhaps, the large majority of cases of cerebral lesion, such as tumor, hæmorrhage and abscess, to say nothing of hysteria and allied disturbances. Why the auditory nerve should be left out in the otherwise systematic analysis of such cases is not clear. The presence or absence of deafness would be of importance, for example, in question of lesion in the pons or cerebellum. Seymour[3] has recently reported a case of cerebellar tumor pressing on the pons, in which deafness by air and bone added much to the certainty of the diagnosis afterward corroborated by autopsy. Although this case comes under the second class mentioned in that no examination of the ears was made, the probabilities were in favor of the tumor as the ætiological factor, and the case is quoted because Nothnagel in his text book on diagnosis of cerebral diseases states that no case of deafness is on record resulting from cerebellar disease. The same writer states that the auditory nerve is not often affected by tumors and hæmorrhages of the pons, basing this opinion on the fact that deafness is rarely mentioned in reports of such cases. He says himself that the fact is remarkable considering the situation of the auditory nerve. The most probable explanation of the seeming rarity of deafness in cases of disease of the cerebellum and pons is that it is seldom sought for, deafness being a symptom which often eludes the observation of both patient and physician, because fair hearing in one ear usually suffices until special attention is called to the subject.

(2.) Deafness is frequently mentioned as a symptom of nervous disease by observers otherwise most accurate, with no examination or only superficial examination of the ear, so that the reader is often left in doubt as to whether the deafness is really due to the nervous lesion (tumor, locomotor ataxia, etc.), or to a plug of cerumen or catarrh of the middle ear. In exceptionally careful reports sometimes occurs the statement "membranes normal," but apparently

[1] Published in full in the *Journal of Nervous and Mental Diseases*, October, 1883.

[2] *Boston Medical and Surgical Journal*, September 6 and October 11, 1883.

[3] *Boston Medical and Surgical Journal*, August 30, 1883.

normal membranes may co-exist with extensive disease of the middle ear. In such cases the hearing through the bone is of great value, for this is generally apparently increased in disease of the middle ear and diminished or lost in case of nervous lesion.

Even when disease of the outer and middle ear is eliminated we are not justified in jumping at once to the brain, as there still remain the inner ear and the course of the nerve fibers to the brain. How unscientific, therefore, is the record of "deafness" among the symptoms of cerebral tumor or locomotor ataxia without further particulars.

Amongst other inaccuracies may be noted the fact that the patient's own statement is often relied on in eliminating the question of deafness as a symptom. The patient's statement that he hears well is, however, of absolutely no value, a total deafness of one ear going sometimes unnoticed for an indefinite length of time until suddenly revealed by accident, as by rolling over upon the well ear in bed.

Even the regular tests by the voice, tuning-fork, and rods are subject to such inaccuracies as to require careful study and repetition in the given case. Deaf children are often brought to the aural clinics who not only deceive their parents, but who would deceive the medical practitioner unless he exercised great care, because they turn so quickly when a noise is made near them that it seems as if they must have heard it. The same children will, perhaps, take no notice of the shrillest sound if made stealthily behind the head by an experimenter who remembers that the field of vision extends laterally over not far from 180° when the head remains quiet, and much farther when it is continually in motion.

As an example of lack of care in eliminating disease of the ear itself as causing deafness, cases of locomotor ataxia, notwithstanding the efforts of Prof. Lucae, have been repeatedly mentioned with deafness as a symptom, and with no examination, or the most superficial examination of the ears. If the ears were carefully examined the cases of deafness as a symptom of locomotor ataxia would probably be reduced to a minimum. The reader has failed indeed to find a single case during a careful search through forty cases, most of the patients being more or less deaf. "Menière's disease" is often diagnosticated with no examination of the ears, while the so-called Menière's complex of symptoms is so common in disease of the middle and outer ear as to reduce greatly the number of cases in which otologists attribute them to nervous lesion.

"It is not the object of this paper to contend that the skill of an otologist should be added to the requirements for neurological training. It is rather to offer the suggestion that the ear deserves an interest at least approximating that accorded to the eye in the diagnosis of nervous diseases. It would certainly be desirable that every practitioner, whether neurologist or not, should practice the examination of the ear and hearing to such an extent as to avail himself at least of the aid gained from the appearance of the membranes, the patency of the Eustachian tubes, and the hearing by air and bone by the various tests, as well as the hearing for different tones, before making a diagnosis of lesion of the nervous auditory apparatus. And further, it is to be hoped that the time is not far distant when reports of cerebral disease ignoring the condition of the hearing and the examination of the ears will be considered as incomplete, as they are at present without record of the condition of the eyes."

Dr. C. J. Blake said that in addition to the general interest of Dr. Walton's paper his remarks point a moral, namely, the dependence of specialists in medicine upon each other; for, while in investigations in physics special students pursuing parallel lines of research help each other to draw cross inferences, in medicine the lines of research in different departments are constantly coinciding, the cross inferences are already drawn by nature. The research of each specialty, therefore, complements and enlarges that of the others, and herein lies one of the safeguards against the narrowing tendency of specialism.

Dr. Walton's paper also contains an important hint to otologists in regard to the investigation of those disturbances of function which may be due either to an affection of the middle or the internal ear, or to both combined; a review of records of aural clinics during the past fifteen years, for instance, shows that the percentage of cases recorded as "disease of the inner ear," or as "nervous deafness," has steadily decreased. This decrease is due to the advancement in the knowledge of diseases of the external and middle ears, the sound-transmitting portions of the organs of hearing, making possible the proper classification of many diseases which were previously relegated to the limbo of "nervous deafness" for want of better knowledge. While the great progress which otology has made during the past fifteen years has been in the study of the middle ear principally, enough has been done and is doing in the investigations of the relations of the ear to the brain to show that the advance of the future is undoubtedly to be in the direction of neurological research.

Dr. B. O. Kinnear inquired the seat of the cerebral center of the auditory nerve.

Dr. Walton said it was supposed to be situated in the first temporo-sphenoidal convolution. Functional disturbances of this portion of the brain may be accompanied by impairment of the sense of hearing. In a recent report in one of the journals was a diagram of an abscess occupying the exact seat of the auditory center, but no allusion was made to the condition of the auditory function. Concussion of the cerebral substance has been followed by temporary disturbance of hearing, whether by vaso-motor or by molecular disturbance is uncertain.

Dr. George B. Shattuck read the next paper upon the subject of "Kairin as an Antipyretic in Typhoid Fever, with Cases."

Dr. F. W. Draper read an account of two cases of typhoid fever also treated by kairin, and expressed the opinion that thus far the employment of this new substance has not been followed by better results than have attended the use of the more common agencies for the treatment of fever, which latter, if less energetic in lowering the temperature, are followed by no alarming symptoms, while in certainly one case in

which kairin was administered the immediate effects of the drug were dangerous to the life of the patien'.

In reply to Dr. J. P. Reynolds, who asked the further history of the cases of Dr. Shattuck's report, the latter explained that they were not given in full, as his object was not to report cases of typhoid fever, or even of the effects of kairin upon the disease, for which purpose its exhibition had not been sufficiently long continued, but merely to report without prejudice practical tests of the action of the new remedy upon the pyrexia of typhoid fever and upon the patient as an individual. Dr. Shattuck did not think the course of the disease had been really modified in any of these cases, with one possible exception, and in that the modification attributable to kairin may have been more apparent than real. This patient experienced a relapse after two weeks of convalescence. In this case the kairin produced great depression of the patient's strength. The lips became pinched, the extremities were livid, and the respiration embarrassed. One of the female patients was also very much depressed by the same drug.

Dr. Reynolds remarked that it is strange that any medicine should cause a sudden and great decline in the temperature, to be followed immediately by a rise to even a greater degree than the original temperature.

The great benefit which is at present apparent from the action of this drug seems to be that which is obtained from the temporary reduction of the temperature, for it is now an accepted fact in all febrile diseases that the condition of the patient is always more hopeful when there are remissions in the temperature than when the high temperature is continuous.

Dr. Shattuck said that in some of the cases in which the temperature was high—even 105° F., the pulse presented no corresponding rate of frequency. Antipyretics were not called for by the actual severity of the disease, but the drug was administered in order to give these patients all the benefits of science.

Dr. Reynolds observed that ordinary cases of typhoid seldom call for the employment of antipyretics or for any marked or special treatment. Such patients do very well under careful nursing with very little medication.

In answer to Dr. E. G. Cutler, the reader said that the peculiar dark-green color is the only gross evidence of the elimination of kairin by the kidneys, and there is nothing characteristic about the perspiration. A quantitative analysis of the urine was not made, and the trace of albumen found is common in typhoid or other fevers.

The German description of the action of the drug was pretty closely reproduced in most of the cases here reported.

MICHIGAN STATE BOARD OF HEALTH.

[Reported for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

The regular meeting of the State Board of Health was held October 9, 1883, at its office in the capitol at Lansing, the following members being present: Arthur Hazlewood, M.D., of Grand Rapids; C. N. Tyler, M.D., of Bay City; J. H. Kellogg, M.D., of Battle Creek; and Henry B. Baker, M.D., Secretary.

The Secretary presented his annual report of property, showing valuable accessions to the library of the Board by gifts and exchanges; also his quarterly report of work done in the office, the regular correspondence alone, exclusive of many postal-card communications not copied, making 572 pages of the letter-book record.

From week to week, as magazines and other accessions to the library are received, considerable work is necessary to make references by which at any time papers on a given subject may be found; also to look up papers on various subjects, and to pack and ship books, etc., to those who undertake to write papers for sanitary conventions, or other uses. During the past quarter three such requests for books and papers have been filled.

A letter from Dr. Whelan on behalf of the common council of Hillsdale invited this Board to hold a sanitary convention in that city. The invitation was accepted, the convention to be held at such time as shall be agreed upon hereafter. A letter was read from Rev. J. Pierson, D.D., of Ionia, relative to holding a sanitary convention in that city. It was decided to hold one in Ionia, if practicable, early in December.

A communication from Hon. C. A. Gower, requesting this Board to examine plans for a proposed new building at the State Reform School was received and acted upon.

A communication was read from Dr. Isler, of the Upper Peninsula, requesting that the documents issued by this Board on the prevention of contagious diseases be translated and published in the Scandinavian and Finnish languages for the use of miners and others who do not read English, and among whom both scarlet fever and diphtheria are now present. The leaflet on communicable diseases (No. 47) was ordered to be translated and published in the Scandinavian, French and Polish languages.

Announcement of the meeting of the American Public Health Association was made, and it was voted to hold a meeting of the Board in Detroit Nov. 13, to attend the meeting of the Association, and to transact such business as may come before the Board.

A communication from the chairman of the Ontario Provincial Board of Health gave notice of a Sanitary Convention at London, Ontario, Nov. 16 and 17. Drs. Baker and Hazlewood were appointed to attend this Convention.

The secretary was directed to procure from the county clerks, for the uses of the Board, a list of the physicians in the several counties, and their postoffice address, if practicable.

A memorial was read from citizens of Morley, Mecosta county, relative to the throwing of sawdust and other refuse into a stream, a subject not controlled by the State Board, but by the courts. The memorialists had been so informed by the Secretary.

The secretary presented a résumé of the work of other Boards of Health.

The Boston, Mass., Board of Health has lately placed measles on its list of diseases to be reported

to the Board by householders and physicians. That Board has publicly offered to superintend the process of disinfection, if requested to do so by the householder. Dr. Kellogg thought it desirable that Boards of Health superintend disinfection after contagious diseases, where possible. He thought disinfection by sulphur would be more efficacious, if carried on in a moist atmosphere.

Drs. Hazlewood and Baker were appointed a committee to examine and report on text-books on hygiene with special reference to alcohol, if any such books are sent to the Board for examination.

Dr. Kellogg for himself and Dr. Avery, Special Committee on the Present Knowledge Respecting Diphtheria, reported a paper embodying a large number of replies to a circular of inquiry, some being very valuable. The report was accepted with thanks, and ordered printed in the annual report.

The next meeting of the Board will probably be for the examination of plans for buildings at the State Reform School.

DOMESTIC CORRESPONDENCE.

CAMBRIDGE, MASS., Oct. 29, 1883.

N. S. DAVIS, M.D., EDITOR:

In an able and comprehensive report of the committeee on Practical Medicine and Epidemics of the Illinois State Medical Society, for 1882-3, published in the weekly JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, October 13, last, the virtues attributed to alcohol as an internal remedy for its germicide power is referred to; also in the same report is mentioned Dr. G. M. Sternberg's recent experiments on the germicide powers of a large number of medicinal agents. According to this report Dr. Sternberg's experiments show that the micrococcus of pus one of the most easily destroyed germs required the presence of 20 per cent. of alcohol for its destruction, while the bacteria termo survived after being immersed in a solution of 95 per cent. alcohol twenty-four hours. From this it is calculated that the amount of alcohol required to be present in the blood of a patient weighing 160 pounds, to destroy the germs most susceptible to its influence would be more than a quart, "a much larger quantity than the most enthusiastic advocate of its use would deem safe to administer." Considering the importance of the subject, and having been accustomed for a long time to believe that many diseases and pathological conditions are dependent upon the presence of the germs, and that the administration of full but safe doses of alcoholic liquors when resorted to early, have been productive of much benefit in aborting or cutting short septic and zymotic diseases, I have thought it worth while to dwell somewhat upon the subject and to see whether there can be discovered certain factors or conditions which tend to substantiate such clinical experience. I believe too, there is a growing feeling and experience on the part of the medical profession that there are many medicinal agents which can be administered in doses practically safe for the patient, and yet be sufficiently effective for the destruction of the supposed germs or at least so as to modify its habits and constitution in its pathogenic condition, that its ravages on the human organism can be arrested or prevented.

In referring to the careful and elaborate experiments of Dr. Sternberg, it appears they, for the most part, were conducted in culture apparatus outside of the body and thus his experiments only represent the results of the germicide reagents or germs *other than pathogenic ones*, a distinction very important to be kept in mind by the experimenter if he expects much value to result from his labors. For instance, if a certain amount of alcohol or other reagent is required to destroy or modify a micrococcus in a culture fluid outside of the animal organism, who will venture to say that that amount of the medicinal agent is needed after the micrococcus has gained admission into the blood, which in the early stages of disease may be well-nigh fatal to such micrococcus? Sternberg has recognized this distinction and has more than once made mention of pathogenic organisms. Sternberg remarks in one place as follows: "Evidently therapeutic value, assuming the correctness of the germ theory, cannot be gauged by germicide power alone, for it is possible that a reagent, which possesses this power in but slight degree or not at all may nevertheless be capable of restricting the development of pathogenic organisms, and thus limiting their power for mischief." Now, if it be permissible to take this view in the premises, as Sternberg has sanctioned, should we not look upon his own "Experimental data," as helps only in a most general way in our therapeutic practice? Surely with such a view of the case it would not seem to be necessary to give a quart of 95 per cent. alcohol, nor three and one-half grains of mercuric bichloride to prevent the development of the septic micrococcus in the blood.

Sternberg, speaking of "Bacteria in healthy individuals," says Nature has placed, or in other words, evolution has developed in the living tissue of animals, a resisting power against the encroachments of bacterial organisms invading and surrounding them, which is sufficient for ordinary emergencies. But when the vital resistance of the tissues is reduced, on the one hand by wasting sickness, profuse discharges, etc., or on the other the vital activity of the invading parasitic organism is increased, the balance of power rests with the infinitesimal but potent micrococcus." Again he says: "Certainly there would be an end to all animal life, or rather there never would have been a beginning, if living animals had no greater resisting power to the attacks of these parasites, which by numbers and rapid development make up for their minute size, than has dead animal matter."

These two citations not only bear the impress but the seal of philosophic and demonstrated truth, and this will all the more appear self-evident when we consider the fact that the micro-organism is isolated from the living animal and placed in a culture fluid when he has no enemies to encounter nor obstacles to overcome, but on the other hand has the best possible chance for full and perfect development out of the rich and highly nourishing pabulum offered for

his choice. Under such circumstances is it any wonder he becomes, if not a formidable, at least an extremely tough beast? Such being the fact our therapeutic practice, notwithstanding the many experiments claimed to have been so elaborate and painstaking, must, as already intimated, depend almost entirely upon empiricism, clinical experience and observation in the choice and use of medicinal agents of supposed germicide nature. This thought further leads to the consideration that the product of these giant or monster germs on entering the animal tissues may take on a retrograde process, or as it were, a sort of atovistic condition in which they may become sensitive to exceedingly small doses of germicide reagents. However this may be, all that is necessary for the therapeutist is, so to apply his medicinal agents that the development of the pathogenic micro-organism shall be arrested, if not by being destroyed, by being rendered *hors-du-combat* until the vital powers of the animal organism can react and the intruding micrococcus be expelled from its borders. Very respectfully,

AUGUSTUS P. CLARKE, M.D.,
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BOOK REVIEWS.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA. Thirty-fourth annual session. Volume XV., 1883. Published by the Society.

The most casual observer of medical progress in the United States must have noticed from the report of the proceedings annually made in the medical journals that the Medical Society of the State of Pennsylvania is accomplishing a great deal of valuable scientific work. For several years the annual volume of transactions has been found teeming with records of experimental and clinical investigation, giving the results of the labors of the most eminent and accomplished physicians of Philadelphia and the entire State of Pennsylvania. Such original observers and indefatigable workers as Oscar H. Allis, R. J. Levis, William Goodell, Trail Green, R. S. Sutton, Wm. Pepper and James C. Wilson have chosen the annual meeting of the State Society as the occasion for presenting to the profession the result of their work. The volume before us embodies the proceedings of the thirty-fourth annual session, held at Norristown in May, 1883.

The address of the President, Dr. William Varian, of Titusville, is devoted to the consideration of some interesting hygienic problems, among others we note the question of cremation and modern means for the restoration of inebriates. The address throughout is thoughtful and suggestive.

The address on Medicine is by Dr. James Tyson of Philadelphia, and is a brief paper on "Malarial Hæmaturia." We presume its published title is adopted solely to comply with custom, since no report is made of recent advances in medicine or any of the topics usually discussed under this title of the "Address in Medicine in Medical Societies." This paper occupies only seven pages, is carelessly written, and contains nothing strikingly novel or unique. We believe Dr. Tyson could have prepared a paper more worthy the occasion. The "Address in Surgery," is by Dr. Alex. Craig, of Columbus; the "Address in Obstetrics," a most interesting paper, is by Dr. George O. Moody, of Titusville; the "Address in Hygiene," is by Dr. Henry Leffmann, of Philadelphia; and the "Address in Mental Disorders," is by Dr. John Curwen, of Warren; Dr. Peter D. Keyser, of Philadelphia, contributes "Some Ophthalmological Observations During Ten Years Service in Mill's Eye Hospital," illustrated by numerous wood cuts, which will interest the cultivators of ophthalmic science. Dr. Lowry Sibbett, of Carlisle, relates his experience in obstetric practice, with an analysis of one hundred consecutive cases. Dr. Hugh Hamilton, of Harrisburg, contributes an article on "Artificial Infant Alimentation," which is the result of extensive investigation and study. The subject is treated from the stand point of chemical analysis and physiological action, and does not include a clinical study of the various articles for artificial infant feeding. This subject is of such vital importance and demands such increasing consideration with our growing civilization, that every contribution to the subject is welcome. This volume contains two papers on "Insane Asylums and the Management of the Insane." We heartily wish that every official of all the insane asylums of this country would read and ponder that of Dr. Samuel Ayers, of Pittsburg, entitled "Our Asylums and our Insane." The other paper treats of "Insane Asylums and their Relations to the Community," by Dr. R. H. Chase, of Norristown. Dr. DeForest Willard, of Philadelphia, in an admirable article advocates the "Early Treatment of Club Foot," deprecating the custom which "waits for the child to be old enough for the operation." Dr. E. A. Wood, of Pittsburg, treats of "Deformity Following Dislocation of the Foot Outwards at the Ankle Joint."

Dr. Samuel W. Gross, of Philadelphia, presents in brief a Plea for the Early and Thorough Removal of Carcinoma of the Breast. His views on this subject have been made current through his Treatise on Mammary Tumors and in several papers published in the last few years.

Dr. James C. Wilson, of Philadelphia, in a scholarly paper presents the Modern Method of Treating Purulent Pleural Effusions. Dr. Wilson demonstrates his well-known ability as an accomplished and expert clinician in this article. It is in reading such a paper as this that we regret that the Transactions of Societies are not more widely distributed. Dr. Wilson's paper is so thoroughly practical and treats of such an important class of cases that it should be in the hands of every practitioner in the land. The treatment is based upon the principle that the containing pus cavity is to be emptied and then obliterated by reparative inflammation. For this purpose it is deemed essential that the opening when made into the chest be kept open, drained by a retained tube, and washed out daily. We give Dr. Wilson's method in so far as descriptive of the oper-

ation in his own words: "The preliminary aspiration, the puncture by means of short trocars (not exceeding in length two inches), the canula being retained only until the pus ceases to flow, when a soft rubber catheter (Nelaton or Jacques') is slipped into position through the metal canula, which is then withdrawn. Catheters are preferable to sections of drainage-tube by reason of the ease with which they can be introduced into the sinus by means of a probe. It is occasionally necessary to change the catheter, or to remove it to clean it. The catheter is retained throughout the treatment by means of silk threads run through its substance and confined to the chest by means of strips of plaster. The washing of the cavity by means of a ball syringe and a system of soft rubber tubing, the connections being made by sections of tapering glass tubes.[1] This operation is to be repeated once a day. The temperature of the water should be from 102° to 105° F., and the amount of force used very slight indeed. At the first sitting no more should be injected each time than one-fourth the volume of the pus withdrawn. This injection is to be repeated at each sitting until the water returns only slightly turbid or clear. After having used for this purpose many of the disinfectants in vogue, I have settled upon the mercuric bichloride as the most efficient and convenient. At first I use 1 part to 15,000, then 1 to 8,000, and finally 1 to 5,000. In the intervals of the dressings the patient wears a large pad of oakum to absorb the discharge. As the cavity contracts and the discharge diminishes, the intervals between the washings may be much prolonged; when the discharge becomes serous and does not exceed two fluid-drachms, the tube should be withdrawn and the sinus permitted to heal. If a spontaneous opening have formed in the chest-wall, this plan of treatment is not thereby modified. Such sinuses are badly located, oblique, tortuous, and always ineligible for operative purposes. In such cases proceed as if no spontaneous opening existed. After the operations such openings speedily heal. Bronchial fistulæ are equally without influence in modifying the treatment."

Dr. William Pepper, of Philadelphia, follows in a contribution to the "Clinical Study of Typhlitis, and Perityphlitis." This paper is just what its title indicates—viz., a clinical study—and is the work of a logical, systematic and painstaking clinical obsever. A group of most interesting cases are here detailed, and the author has brought to the study of this vitally important class of cases a thorough familiarity with the history and literature of the subject. The paper is eminently practical, and deals more particularly with the diagnosis and treatment of the various stages of typhlitis and perityphlitis. We regret that our space will not allow a résumé of this paper. Dr. E. O. Bardwell, of Emporium, contributes a brief paper on "Scarlatina," detailing his personal experience with this disease. Dr. John V. Shoemaker, of Philadelphia, follows in an interesting and instuctive paper on the "Hair, its Use and Care."

[1] The author maintains that the chest cavity cannot be properly washed out by a tube passed in at one opening and out at another (through drainage), but with a single opening the distension of the cavity with due caution can be practiced at each sitting when the syringe is used.

This paper, as also the ingenious contribution of Dr. R. J. Levis, of Philadelphia, on "Surgical Expedients in Emergencies," has been elsewhere published in abstract and hence both are familiar to the readers of current medical literature. Both gentlemen are so well known in connection with dermatology and operative surgery respectively as to deservedly receive the attention of the profession whenever their views are promulgated. The following papers, eminently practical and instructive, we are prevented from noticing in detail by want of space: "Diagnosis, Prognosis and Treatment of Mitral Stenosis," by J. T. Eskridge, M.D., of Philadelphia; "Lithæmia," by J. B. Walker, M.D., of Philadelphia; "Clinical Notes on Conrallaria Majalis," by Edmund T. Bruen, M.D., of Philadelphia; "Abnormal Ocular Conditions," by William S. Little, M.D., of Philadelphia; "House Plants and Lung Disease," by J. M. Anders, M.D., of Philadelphia. The remainder of the volume is occupied with reports of the County Societies. These reports show the local societies in the various counties in the State of Pennsylvania to be in excellent working condition, and thoroughly *en rapport* with the State Society. Indeed, one cannot peruse the ninety-six pages of this volume devoted to the reports of the County Societies without a feeling of felicitation. In addition to setting forth the condition of the Societies in the various counties, interesting and valuable data are here recorded of local epidemic influences, local sanitation, and clinical observation. This portion of the volume particularly and eminently reflects well-merited distinction upon that most efficient of permanent secretaries, Dr. Wm. B. Atkinson, of Philadelphia, whose industry and intelligent supervision, as well as the efficiency of the organization, is conspicuous. This portion of the volume is the strongest argument which could be offered in reply to the objections which are urged against the publication of the proceedings of State Societies in this form instead of through the columns of the medical press. It would be quite impossible to gather within one cover the data here recorded unless the State Society of Pennsylvania could equip, edit and publish a journal of its own. This for State Societies is, of course, impracticable at the present time. The volume closes with a complete alphabetical list of the presidents and permanent members of the State Society, the officers and members of the County Societies, and appended to the whole is an alphabetical list of members of County Societies with their post-offices. Those only who have some practical knowledge of the work of a secretary can fully appreciate the labor devolving upon that officer in the preparation of such a volume. The entire profession of Pennsylvania is to be congratulated upon the condition of the State Society as indicated by the volume of Transactions for 1883.

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM OCTOBER 26, 1883, TO NOVEMBER 2, 1883.

Moore, John, Lieutenant-Colonel and Assistant Medical Purveyor: to be relieved from duty as Medical Director, Headquarters Department of the Columbia, to proceed to San Francisco, California, and assume charge of the medical purveying depot in that city. (Par. 10, S. O. 243, A. G. O., October 24, 1883.)

McKee, James C., Major and Surgeon: relieved from duty in the Department of California and assigned to duty as Medical Director Department of the Columbia. (Par. 5, S. O. 249, A. G. O., October 31, 1883.)

Wolverton, Wm. D., Major and Surgeon: granted leave of absence for one month. (Par. 6, S. O. 201, Department of the East, October 24, 1883.

Merrill, J. C., Captain and Assistant Surgeon: granted leave of absence for one month. (Par. 7, S. O. 201, Department of the East, October 24, 1883.)

NECROLOGY.

ZITZER, JOHN JACOB, M.D., was born in Friedburg, Prussia, February 20, 1826; died of general debility, the result of pneumonia, at his residence in Baltimore, Md., October 30, 1883. He was descended from an old aristocratic and influential family in Germany. After graduating from Heidelberg, he entered the Prussian army as a surgeon. Here he was noted for a high order of intelligence, and for his republican principles and soldierly bearing, and professional skill. His democratic and red republican views led to his resignation from the army. He then went to Hungary and accepted service there, and became Surgeon General of the Hungarian army. After the failure of the revolution there he came to America, and settled at Carlisle, Pa., where his abilities as a physician and his worth as a citizen led to extensive employment in his profession, and to popularity, and particularly with the German population of Pennsylvania. His views of government were so pronounced, that he soon began to take part in local, State, and national politics, and became quite a leader among the Germans. He was at one time Chairman of the Republican State Central Committee of Pennsylvania. Dr. Zitzer had the pleasure of first introducing Carl Schurz to a Republican mass meeting, where his eloquence was so effective. The doctor was extensively known throughout the State of Pennsylvania, and held in high esteem by the leaders of the Republican party, and had for warm personal friends General Grant and Simon Cameron. He was a member of the Cumberland County Medical Society, and a delegate from it to the American Medical Association in 1869. He attended the meetings of the latter again in 1871 and 1872. He was made an honorary member of the California State Medical Society, when in San Francisco in 1871. He was as restless in his medical views as he was revolutionary in political principles. Doctor Zitzer had acquired a considerable estate, among which were two valuable farms near Carlisle, which he leaves to his three daughters. To his faithful housekeeper and attendant he gave a hotel property in Carlisle. His remains were taken to Carlisle, and interred in the old grave-yard. J. M. T.

MONTGOMERY, EDWARD, M.D., of St. Louis, Mo., was born in Ballymena, near Belfast, County Antrim, Ireland, December 20, 1816; died of pneumonia at his residence, in St. Louis, Mo., October 29, 1883. His education was obtained in the Royal Academical Institution of Belfast, and his medical studies pursued at Edinburg, where he received his degree of M.D. in 1838. Shortly after he began practice in his native place, but in 1842 he came to America, and passed some years in the States of Louisiana and Mississippi. But in 1849 he settled in St. Louis as a general practitioner, where he acquired an extensive and responsible business. Dr. Montgomery was a man of agreeable manners and of exemplary character, and esteemed by the public and his professional brethren. In 1839 he was united in marriage to Hannah French, of French Park, near Belfast, who survives him with six children—four sons and two daughters. Dr. Montgomery re-visited Europe and his native place in 1873, being delegated that year from the American Medical Association to the British Medical Association, and was also one of the Commissioners from the State of Missouri to the Vienna Exposition, both of which he attended. The doctor was a careful reader of the best medical works, a close and an accurate observer of disease, and an occasional contributor to medical journal literature. I cannot enumerate his writings, but among them were essays on congestion, typhus, typhoid, erysipelatus, and puerperal fevers; on cholera, croup, cerebro-spinal meningitis, illeo colitis, hepatic colic, post-partum inflammation, scarlatina, diphtheria, uterine hæmorrhage, variole, anti-phlogistic treatment, and differential diagnosis of croup and diphtheria, etc. Dr. Montgomery was an active and influential member of the St. Louis Medical Society, and of the St. Louis Medico-Chirurgical Society, and was honored with the presidency in both. He was also a valued member of the Missouri State Medical Society, which he served as vice president and as president. He became a member of the American Medical Association in 1872, and attended the following year. Dr. Montgomery had a taste for the exact and natural sciences, and was a member of the St. Louis Academy of Sciences. The death of a physician of medicine in actual practice, after but a brief illness, produces quite a shock to a community where he is intimately known, as was Dr. Montgomery for a third of a century. Besides his eminence as a physician, he discharged all the duties of a good citizen, an indulgent parent, a kind husband, and the faithful friend. His funeral took place from the Central Presbyterian Church. J. M. T.

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ORIGINAL ARTICLES.

CEPHALÆMATOMA OF THE NEW-BORN.

DR. C. W. EARLE, CHICAGO.

[Read before the Section on Diseases of Children.]

This is a soft, elastic, fluctuating tumor, generally painless, and situated upon one of the cranial bones. It takes place, it seems to me, with somewhat greater frequency than the literature of the subject would lead us to suppose. I have already seen six cases in twelve years' practice.

It is stated by most writers, that in the great majority of cases, indeed in almost all, the tumors have been upon the right parietal bone, inasmuch as it is this bone that is exposed to the pressure of the rigid os uteri in the greatest number of deliveries. Contrary to the experience of other observers, five cases which I have seen have taken place upon the left parietal bone and one on the right. It has, in a few cases, been noticed upon both of the parietal bones, although this has not occurred in my practice.

Professor Byford has observed at least one case of this kind, and Jacobi and other authorities make mention of a double cephalæmatomæ.

The tumor has not, in my cases, made its appearance immediately after birth. From one to four days usually elapse before my attention has been called to the difficulty.

When it is first noticed it is usually a soft and painless enlargement, but in the course of a few days a firm ridge is usually noticed surrounding its base. This ridge, which is almost, if not quite, pathognomonic, is produced by the efforts of nature to repair the injury.

The seat of the difficulty is between the bone proper and the periosteum, and the enlargement is caused by the rupture of a blood-vessel in this position. The hard ring which I have mentioned is bony material thrown out from the periosteum, and does not in every case contract evenly in all directions. In one or two cases I have noticed hard projections apparently springing toward the summit of the tumor with greater rapidity than in other places.

As this deposit goes on, the tumor loses its soft fluctuating feel, and in the course of a few weeks nothing can be detected except a slight want of symmetry in the two parietal bones, and even this usually disappears in a few months.

We have been taught that this difficulty is caused by pressure upon the cranial surface by a rigid os uteri. In all probability the great majority of these cases are caused by this pressure, but from the fact that cephalæmatoma have been observed in breech deliveries,[1] it must be admitted that the rigid os does not, in every case, produce the tumor.

It is possible, it appears to me, that, in addition to the pressure exerted by a rigid os uteri, and from injuries received by forceps, that there may exist in the blood-vessels a tendency to rupture with ease,—an undue thinness of these vessels, which produce a liability to hæmorrhage.

The most important question, however, connected with this entire subject is its diagnosis, and it appears to me that there are four difficulties with which it is liable to be confounded:

1. Caput succedaneum.
2. Congenital encephalocele or hernia cerebri.
3. Erectile tumors.
4. Craniotabes.

There appears to be a tendency on the part of some writers upon the subject, to confound caput succedaneum with cephalæmatoma. There is absolutely no similarity between the two difficulties, excepting, perhaps, that they are projections or enlargements upon a certain part of the head.

The *caput succedaneum* is an œdematous condition of the tissues, a difficulty of the scalp, cellular tissue and blood-vessels, etc., etc., which is usually found directly upon the presenting part, and may embrace one of the sutures. It does not fluctuate, and disappears rapidly. It is more prominent, more pointed, and has altogether a more boggy feel than the cephalæmatoma. A cephalæmatoma is a collection of blood between bone and its periosteum. It never is in the line of a suture. It fluctuates, and has every appearance of free fluid, surrounded by tissues. In the course of a few days, the bony ridge, to which I have already alluded, can be made out, and our diagnosis is complete.

I should remark before leaving this part of my subject, that a caput succedaneum may hide a cephalæmatoma for three or four days. That is, we may have an ordinary œdematous tumor on the presenting part of the head, and under this, and between the bone and its covering proper, a ruptured blood-vessel and a collection of fluid blood, which makes itself known after the œdema subsides.

Congenital encephalocele never occurs, with possibly an exception in necrosis from syphilis, in the body of the cranial bones. It always appears in the line of some suture. A pulsation is usually felt syn-

[1] Vogel, p. 57.

chronous with the heart. Cries and agitation of the child cause it to enlarge.

A *vascular tumor* has somewhat the same boggy feel which I have noticed in caput succedaneum. It may take place in the same position that we usually find a cephalæmatoma, but it does not fluctuate. It has no bony ridge. It usually does not protrude as a cephalæmatoma does.

By *craniotabes*, is meant the soft places which are found upon the cranial bones in rickety children. It has appeared to me that a layer of bone in some of these children can be so thin, or can be absolutely wanting to such an extent that a softness and fluctuation could almost be made out, thus giving rise to the suspicion that a bloody tumor of the scalp existed at this point. Such a case as this never occurred in my practice, but it always appeared to me possible, and, in my teachings I have cautioned my students in this respect.

Treatment.—The treatment of these cases really amounts to a judicious letting alone. Nature, in a great majority of the cases, cures this difficulty without any assistance. There is, however, on the part of parents and friends, a constant desire to interfere, and the physician will be importuned, in season and out of season, to poultice and blister and to open, and in every possible way interfere with the process that nature is following out to perfect a cure.

Formerly it was regarded as good practice to open these tumors, but from the fact that a number of them thus opened were followed with long continued suppuration and exhaustion, and, in some cases, death, it has more recently been regarded the best practice to not expose the internal part of the tumor to the air by opening them, but to allow nature to perfect a cure. Some mild anodyne liniment or embrocation may be ordered and the tumor should be protected from any external violence. Where the tension is very great, and the tumor somewhat larger than usual, and in cases where the child experiences considerable pain, it is probably better to depart from the usual methods of treatment, that of letting it alone, and with proper antiseptic precautions open the tumor, cleanse out the cavity and dress it in such a manner as to prevent, as nearly as possible, suppuration.

A case similar to this has recently been observed in the Cook County Hospital of Chicago, where the tumor became so painful that the child was kept from obtaining its usual rest, and its nutrition became very greatly impaired; until finally an incision was made with the precautions which I have stated above and the child made an excellent recovery.

What I desire to call attention to in this brief paper is, first, the greater frequency of this difficulty than we have hitherto supposed; secondly, the presence of the tumor in the right parietal bone in five cases of the six I have seen; third, to the four points of differential diagnosis; and, finally, that in a few cases, where the pain, swelling and tension becomes very great, it is admissible, indeed, the best practice to open these enlargements and treat them antiseptically.

TWO CASES OF ABDOMINAL SURGERY--BOTH FATAL.

BY J. P. THOMAS, M.D., PEMBROKE, KY.

[Read before McDowell Medical Society, Oct. 24, 1883.]

OVARIOTOMY.

CASE I.—On Aug. 1, 1878, I was called to visit Mrs. M.; white; æt. 51 years; on account of an attack of malarial fever. I found her unusually prostrated, but learned that she had been the subject of chills for two months, which had finally resulted in remittent fever, which satisfactorily accounted for her anæmic and prostrated condition. In a few days the fever was arrested. Prescribing a simple tonic, I was about to discharge the patient, when she called my attention to an enlargement of the abdomen, of which she gave the following history: About the 1st of June (1878), while dropping tobacco plants for her husband to transplant, she felt something give way in her right side, which caused most excruciating pain for a short time, but as the pain soon ceased, she continued her occupation until night, and on examination of the now very sore side (left hypogastrium) discovered for the first time a knot about the size of a small orange, which had increased very rapidly since, and added, "I am afraid I am pregnant."

Her abdomen was fully as large as a woman in her sixth month of gestation. She had been for two years passing through the menopause; and this, with her own age and that of her youngest child (5 years old), was sufficient to assure her that she was not pregnant, but, as none of my assertions or arguments would convince her to the contrary, to accomplish the object, I made a careful examination—rectal, vaginal, uterine, percussion, palpation, etc. The sound entered the uterus 3½ inches, which was movable, and its movement imparted a distinct impulse to the tumor, which evidently had its origin upon the right side. I diagnosed cystic degeneration of left ovary, without adhesions.

Her situation was fully explained to her, also the only means that offered any hope of a cure, and the risk of the operation to life, dwelling upon the hazard she would be exposed to by the removal of the tumor. After she seemed fully to understand and appreciate the danger of the operation, she was advised to consult her husband and friends, and consider the matter well before she decided. But she at once concluded to undergo the operation, even urged its immediate performance, which, I now regret to say, I declined. But being governed by authorities who advise a postponement of the operation as long as the woman can live with the least comfort, also hoping to be able to improve her general health, which latter object I think unattainable in cases where the growth is rapid, as was the case in this instance. From the 1st of June to its removal, on the 20th of September, it had attained such enormous dimensions as to extend to the knee caps when in a sitting position. But let that be as it may, it continued to grow, and she to emaciate in the same ratio, and that in spite of the best tonics and tissue builders, until it seemed that all the tissues of the organism were being absorbed by the tumor,

and it was plain from examinations made from time to time, that adhesions were as rapidly forming. My experience in this case, and three others I have seen, leads me to think that some very high authorities on ovariotomy are in error when they advise the postponement of the operation, as one says,[1] "until it (the tumor) has grown so large as to distend the belly; and when the woman has become thin and her health begun to fail." The reasons for waiting, as given by the same distinguished authority—that is, if an operation has been decided on—do not, in my opinion, counterbalance the sometimes innumerable adhesions that develop after a correct diagnosis has been made, and the operation decided on, viz: that by waiting until death is imminent before the operation, "that the woman will have lived longer, should the operation result in death; that the abdominal walls having become thinner, the incision will be proportionately shorter and shallower (why shorter, he does not say); that the patient being less full-blooded, both hæmorrhage and inflammation will not be so likely to occur; and that the pressure and rubbing to which the peritonæum has been for some time subjected will make it less vulnerable, and therefore less likely to take on inflammatory action." The woman would, of course, have lived longer, provided an early operation proved fatal; but its postponement as certainly increases the risk, and lessens her chances of living out her allotted days in comfort. As to the thinning of the abdominal walls, the depth of the incision above, or aside from the peritonæum, makes but little difference; and there are but few who are very full-blooded when first seen by the surgeon, and when they are, the necessary hæmorrhage and continued drainage will ordinarily counterbalance plethora.

Lastly, this able authority seems to overlook the fact that this same rubbing and pressure that he speaks of as rendering the peritonæum less liable to take on inflammatory action, is the cause, to a great extent, of the adhesions; and all admit that in proportion to the number and extent of the plastic deposits or inflammatory exudates resulting in adhesions, is the danger of the operation. This none will deny, but recognize as in accord with pathological common sense, and practical clinical experience. Before describing the product, and manner of the termination of this case, it is perhaps only justice to the operator, that a brief note should be given of the antecedent history of the patient.

1. She was of strumous diathesis from birth.

2. Constant tendency to development of scrofula. Tuberculous heredity.

3. Mother and two sisters died of phthisis pulmonalis.

4. In 1863 had hepatic abscess, which fortunately pointed externally and was opened by an ordinary abscess lancet; but the discharge of pus, first and last, was so enormous, and reduced her to such an extent as to cause me to despair of her life.

5. Though the mother of five children, there was an intermission of thirteen years from the birth of the first to the birth of the second child, after which the remaining three were born with only an average of two years between births. However, for two years before the birth of the second child, I had treated her for anteflexion, ulceration of the os and cervix, and irregular menstruation; all of which, each in part, were considered as the cause of her sterility, which was verified on her becoming pregnant when these well-known obstacles to fecundation were removed.

6. Then her present surroundings were anything but favorable for so formidable an operation, viz., only one room to the house, and that overstocked with furniture. This was operating bed and reception room, the patient having about a dozen female friends as "near neighbors," who, as is usual in all rural districts on such occasions, were over-burdened with curiosity, meddlesome attentions, and full of gossip—all under the name of sympathetic interest in the patient.

Yet with all the above obstacles in the way of success, on the 20th of September, 1878, assisted by Drs. Fairleigh and Hickman, of Hopkinsville, Ky., and two medical students, she was given a hypodermic of morphia and an ounce of whisky per orem. A mixture of chloroform and alcohol was the anæsthetic employed. When fully chloroformed—previous to the abdominal incision—a large-sized aspirator needle was introduced but failed to give exit to any discharge on account of the semi-solid contents of the sack. On withdrawing the needle, on its point was a portion of a thick jelly-like substance, showing it to be a colloid cystic tumor. Though the tumor was extremely large, yet believing the shorter the incision the less risk, and thinking it an easy matter to open the sack and dip out its contents, if necessary, only the usual incision from umbilicus to pubes was at first made; but, on opening the sack, its contents were sufficiently solid to be easily removed by the hand, and after the removal of a water bucketful of a colloid substance consisting of alternate stratas of an amber and violet colored jelly, it was found impossible to open and empty the several small cysts, and necessary to enlarge the incision up to the ensiform cartilage which was done by cutting around the umbilicus to the left. After detaching with the hands the numerous adhesions and ligating a small portion of the omentum, the sack was found with a short thick neck, which was ligated by transfixing it through the center with a perineal needle armed with a heavy double ligature of saddler's silk previously soaked in a strong solution of carbolic acid, and firmly tied on each half. The cavity was carefully sponged out with a five per cent. carbolic solution; the abdominal incision closed with interrupted silver sutures. The pedicle was returned to the cavity but the long ends of the silk ligature left hanging out of the pubic end of the wound for drainage. Compresses wet in a ten per cent. solution of carbolic acid were placed over the wound, and the whole secured by broad flannel bandage. Every antiseptic precaution was employed except the spray. Operation occupied fifty-five minutes. After patient was put to bed and warm applications made, reaction was prompt and complete; recovery from chloro-

[1] Goodell's Lessons in Gynæcology.

form and shock perfect, but within an hour there was considerable oozing from the numerous minute vessels torn in breaking up the adhesions. This discharge of bloody serum was so profuse that I summoned my consultors who had left. They only advised that she be turned on her side to facilitate the drainage, and their prognosis was very hopeful. This drainage continued over twenty-four hours, and then gradually ceased. Temperature was never over 101° and pulse never higher than 95. On second and third days she was cheerful, with a good appetite, and several times expressed her gratitude to me for the relief she felt. The bladder was emptied every eight hours by the catheter, and usually contained from eight to ten ounces of rather coffee-colored urine—the color of which created a suspicion that the kidneys were not exactly in a healthy condition. After drawing off the urine on the morning of September 24th, at one A. .M, only about four ounces, I was compelled to leave her for a few hours in the care of an inexperienced female and husband. On returning at nine A. M. I found the room full of gossiping women who had several times been requested to remain away from the patient, but as there was but the one room it was very difficult to keep them out of it. Also, to my chagrin, observed symptoms pointing to uremic poisoning, in the stupor so characteristic of a cessation of the secretory action of the kidneys, but on arousing her she conversed intelligently and said she was very comfortable; but, on being left to herself, would fall into a stupor. I at once introduced the catheter and found the bladder only contained a few spoonsful of "coffee-grounds" urine with distinct carbolic acid odor.

I have seen a case of poisoning by carbolic acid taken by mistake, which recovered, but the urine passed for several days was precisely of the same character as that found in this woman's bladder.

She was turned upon her side, the region of the kidneys cupped, diuretics administered, even pilocarpine in one-fourth grain doses hypodermically; but in spite of the best efforts to arouse the kidneys to action, they could not be made to resume their function, and my patient died—*not from the operation*, but of *uræmia*, *from failure of the kidneys to excrete the excess of uric acid*, the *suppression being produced by absorption of carbolic acid.*

The abdominal wound had healed by first intention, except at the lower extremity of the incision, which gave exit to the ligature of the pedicle, and the sutures would have been removed the next day. There was never any symptom of peritonitis, pyæmia, or septicæmia, the three most formidable adversaries against which the operator usually expects to have to contend.

The mania for Listerism has already caused many, and no doubt is yet destined to cause many more deaths, by the excessive use of carbolic acid, for occasionally poisoning has resulted from the weakest solutions.

Listerism has only taught us cleanliness, watchfulness, and painstaking, just as homœopathy taught us to rely upon smaller and more frequently repeated doses. But it is evidently on the wane. Dr. Hollister, of Chicago, in his address on "Practical Medicine" before the American Medical Association, struck the key-note when he said: "Within fifty years Listerism will be a procedure of the past, and only remembered as a literary curiosity."

It, like many other fashions in medicine, was reared upon mere hypothesis, has had its day, but is now on the down grade, being gradually abandoned by the leaders of professional opinion. Many who now employ "antiseptics" in surgery, do so because they fear professional censure and criticism, should failure result.

I have had invariably as good success in the treatment of wounds by the old methods, but in capital operations I employ it in part, to avoid criticism in cases of death.

This tumor sack and contents weighed 44½ lbs.; some of the contents were lost. I am convinced if I had operated two months sooner than I did, that there would have been but few or no adhesions, and that the patient would have been in much better constitutional condition, and the kidneys perhaps in better condition to eliminate the urea, and even resist the action of the carbolic acid.

LAPARO-HYSTERECTOMY.

CASE II.—Mary Bronaugh, colored; æt. 50; mother of several children; had been for two months unable to continue her occupation as cook; had been treated by another physician, but without benefit, and she continued to complain of the same symptoms, and to lose flesh more rapidly than was usual in an attack of malarial fever, for which she had been treated by my predecessor. I was sent for to see her on the 16th of October, 1882. From the following symptoms and history, my diagnosis was chronic intermittent fever; so at the beginning, there was but slight disagreement with her former physician.

Symptoms—Constant aching in all the joints, back and head, accompanied with an exacerbation of fever every afternoon about three o'clock, without any discoverable cold stage; almost constant nausea, and extreme tenderness of epigastrium, but inability to vomit; tongue heavily coated; complete anorexia; but little thirst; bowels constipated; slightly ptyalized. At this visit, there was no report of any abdominal enlargement, or complaint of pain referable to bowels. Cachectic in appearance, and considerably emaciated. Prescribed an effervescing cathartic, to be repeated until bowels acted thoroughly; sinapisms to stomach, and on spine opposite stomach, crushed ice, and a powder of bismuth with one drop of hydrocyanic acid dil. every hour; a four grain capsule of quinine every two hours, if stomach would retain it. This treatment to be continued until next visit. Oct. 17, 5 P. M. (two hours after usual rise of fever), said she felt much better; no rise of fever; nausea relieved; had been able to retain ten of the capsules of quinia (40 grs), but still complained of soreness over the stomach, and added, "My bowels pain me very much at times, and are swollen."

Placing my hand under the cover to ascertain the location of the pain referred to her bowels, and the character of swelling, I was very much astonished to

find the whole abdomen as large as that of a woman at full term. On combining inspection with careful palpation, I discovered a hard, nodulated mass, extending from the ramus of pubis to the umbilicus, apparently not only surrounded, but covered by fluid. The entire abdomen had that peculiar rounded contour characteristic of ovarian cystic tumor; the navel somewhat depressed, and not the least pouting, as is usual in ascites. This was the appearance of the umbilicus, notwithstanding the central hard mass, which conveyed to the touch the sense of the nates of an emaciated fœtus.

This woman was an old servant of the family with whom she lived, being their slave in ante-bellum days, and with whom she had continued to live and serve as cook, and consequently they were very much attached to her, and interested in her illness. Yet neither she nor her employers had ever even suspected anything abnormal about her belly, except very recently, she had discovered it was larger than usual, and had never suffered any pain in that region until since she was attacked with this spell of fever, and now, it was only occasionally severe, but had been more so within the past week.

After several visits, and as many examinations, embracing uterine and rectal, though I could discover nothing resembling either ovary per rectum or per vagina, it was plain the uterus was immovable. She had passed the menopause four years before; the characteristic cachexia of malignant disease was marked, with extreme emaciation, and yet, I reached only a doubtful and unsatisfactory diagnosis of "ovarian cystic fibroid tumor." It is yet inexplicable to me why I was so dull as to exclude malignant growth, though often considered. The only reason is, perhaps, that her white friends, who were intelligent and observant, had never suspected any growth, and she had never suffered pain in this region until recently, and it was evident that the growth and development of the tumor had been of long standing. However, I finally excluded malignant disease for the unsatistactory diagnosis of cystic degeneration of one or both ovaries, solid and fluid, with adhesions. She and her former mistress were made to understand that she was beyond the reach of medicine, and nothing but the aid of surgery could offer her a chance for life; the dangerous character of the operation, and one, in her special case, that would almost certainly prove fatal, and might result in death sooner than if none were performed, but there was a bare chance that a cure might result from the removal of the tumor.

To my astonishment, she, without a moment's hesitation, expressed an anxious desire to have it performed.

As her malarial attack seemed "broken up," I placed her on tonics and good diet, and promised that I would consider the expediency of an operation. I left her, and did not again see her for ten days, having really abandoned any idea I may have had of attempting an operation, when she sent for me. On complying with her summons, I was struck with the still farther rapidity of the emaciation in so short a time. She was now a great sufferer from pain and dyspnœa, requiring laudanum at night to procure sleep. The tumor had increased somewhat in general contour, and it was plain that the adhesions were more extensive than I had before realized, apparently to entire walls of the abdominal cavity.

She said she "had sent for me to beg me to please cut her open and take this thing out." I now used every argument to dissuade her from the idea of an *operation*, telling her over and over of the extreme risk of the operation, and finally that I feared she might die on the operating table, and if not so soon, that I could hold out but small hopes of success.

She only implored and plead for the operation, saying, "If I had a sharp razor I could and would cut myself open," and that she had rather die asleep under the knife than live another day as she was living. Finding it impossible to reason her out of her determination to be operated on, I promised to call to my aid counsel, and after they had examined her, if an operation was decided on, that I would perform it, but that she must wait until colder weather. Now, having a slight suspicion of the malignant character of the tumor, as a sort of placebo, but with a hope it might build her up to some extent, I put her upon Dr. Goodell's four chlorides, as he terms it. It is as follows:

℞.—Hydrarg., chloridi corrosivi.....grs. ii.
Liq. arsenici chloridi..... ℥i.
Tinct. ferri chloridi..... ℥iii.
Acid hyorochlorici dil..... ... ℥iv.
Syrupi ..... ℥iii.
Aquaæ ..... ℥ii.
M.

Signa.—One dessertspoonful ter in die, in wineglass of water after meals.

This compound has done me good service in many cases of chlorotic anæmic girls, in amenorrhœa, and other cases of uterine disease. It is the best appetizing tonic, as well as alterative, to be culled from the materia medica, and did seem to improve the constitutional tone of this woman.

In accord with promise, the 20th of November was appointed to meet counsel, and, if so decided, operate.

In the presence and with the counsel and assistance of the following gentlemen, the operation with the long name at the head of this report, or hysterectomy, or Freund's operation, was performed: Drs. Fuqua, Fairleigh, and Sergeant, of Hopkinsville; Dr. Barton W. Stone, of Western Asylum for the Insane; and Drs. Robertson and Bell, of Pembroke. To show the extreme difficulty of making a correct diagnosis of cancer of the fundus uteri, where the os and cervix are free from the disease, and in fact of many of these abdominal growths, I will state the diagnosis arrived at in this case by all present, and that after careful conjoined manipulation, with both vaginal and rectal exploration, together with aspiration of the tumor, which latter operation revealed only acetic fluid, with the characteristic amber color, slightly tinged with blood. The diagnosis announced by two of the gentlemen, of age and considerable experience in abdominal tumors, and who had given

the subject studious attention; besides, they are gentlemen of acknowledged ability as skillful surgeons—Drs. Fuqua and Fairleigh—was solid encysted ovarian tumor, complicated with ascites, and extensive adhesions, with but small hope of a successful result; but as the patient pleaded so earnestly for the operation, no matter how doubtful the success, that she should be given the benefit of the only chance for her life.

In this decision all concurred.

Personally, I was satisfied the diagnosis was nearly correct. When, again, the smallness of the chance of saving her life, and the almost certainty of a fatal termination of the operation, was explained to her in the plainest language that could be employed, to give her a full knowledge of the risk she ran of immediate death, but with the assurance that death was inevitable in a very short time if no operation was performed, still firm in her demand for its performance, she was chloroformed. Every emergency had been previously provided for, as temperature of room, hot water, a number of bottles, the furniture of room removed, whisky, hypodermic syringe, etc., etc.; the usual antiseptic precautions employed, except the spray and gauze dressing; each gentleman assigned his part, every respiration and pulsation carefully watched—or, in brief, I was ably and skillfully assisted.

The usual incision of the abdominal wall down to the fascia, directly following the linia alba, beginning just below the umbilicus and extending to the pubis, the fascia was incised upon a grooved director until the peritonæun was reached. There being no bleeding this membrane was nicked by scissors preparatory to dividing it and bringing into view the sack; but this small nick was sufficient to inform me there was no sack, but that formed by the peritonæun which was partially divided as exploratory and exposed to view, what was instantly recognized as a large encephaloid sarcoma growing from the fundus of the uterus. Before proceeding farther with the operation, I called for a brief consultation, suggesting the immediate closure of the abdominal wound and abandonment of the operation, but the decision was to proceed and remove the entire uterus with the tumor, as the complete destruction of both ovaries, broad ligaments, fallopian tubes and all uterine appendages, with already, perhaps, extension to the sigmoid flexure and bladder, of the disease, rendered it an impossibility for the poor woman to survive such extreme destruction of important organs more than a few days if no operation had been attempted. Further exploration revealed an enormous encephaloid mass deeply imbedded in the fundus uteri at its base and extending above the umbilicus attached throughout to the peritonæum from the edges on both sides of the abdominal incision to the spinal column, also to the omentum, transverse colon, lower border of the left lobe of liver, base fond of bladder, sigmoid flexure and rectum, with the interspaces of the abdominal and pelvic cavities filled with acetic fluid.

The adhesions were, however, easily broken up by the hand with the occasional aid of the probe, peeling off like an orange, except that of the omentum, which necessitated the ligation of a portion of omentum, requiring three ligatures, and cutting off the portion attached to the tumor. Though the adhesions to the bladder embraced nearly the whole body of that viscus, and their detachment embarrassed me much, yet by careful manipulation and gradual enucleation with fingers, was successfully broken up without wound or injury to the organ. There were no remains of either ovary, broad or round ligaments or fallopian tnbes—all had been destroyed by the disease. The uterus was enormously hypertrophied—both body and cervix, by interstitial infiltration of cancerous deposits.

The upper portion of the tumor was so soft and brain-like that it required the most delicate handling to keep it from breaking into fragments and distributing them in the peritoneal cavity. After all attachments were severed, Dr. Sergeant raised the entire mass, including the uterus, from the cavity and held it while an ordinary perineal needle, armed with a double ligature of several strands in each of strong saddler's silk, was passed through the cervix at the vaginal junction, when the cervix was ligated bilaterally and then *en masse*, and amputated with probe-pointed bistoury just below the internal os. There was no hæmorrhage from the stump, it having the usual gray appearance of uterine muscular tissue, but much more anæmic in appearance.

The cavity was as carefully sponged out with new sponges, previously rendered "aseptic," as possible, and the abdominal incision closed in the usual way, except that carbolized silk was employed instead of silver wire, as in case one. The shock was so profound that it was impossible to put the woman to bed, and bottles of hot water were packed around and over her where she lay on the table, and blankets piled on her, hypodermics of ammonia and whiskey given, and every effort employed to establish reaction, which, for the space of at least one hour, was considered doubtful, but at the end of this time, the pulse could be felt at the wrist, and slowly reaction was established. In answer to the question, "How do you feel, Mary?" in a distinct voice she expressed herself as feeling better than she had for several weeks. She was then put to bed, and after being there for some time, without speaking, she voluntarily expressed her gratitude to me for so much relief, and repeated that she felt very comfortable. So complete was the reaction, both from shock and chloroform, that one or two gentlemen ventured to express a hope of her recovery, and one was inclined to believe she would recover and live for a short time, but, of course, recovery was an impossibility, short of miraculous interference. Quinine, as is my habit previous to any operation, had been given in large doses for several days before the operation, and now one-third of a grain of morphia, with a full dose of the cinchona salt, was given in whiskey. At the end of three hours, she was left in care of a sister only, as I had no hope she could live over two or three hours longer. Wonderful as it was to all who witnessed the formidable character of the operation required to remove such a mass, with such wide-spread adhesions, and such destruction of intra-abdominal

and pelvic tissue, that she did not die before the operation was completed—which occupied fully one hour—yet, as I am informed by her colored friends and watchers, she lived in comparative comfort until 3 o'clock next morning, and died without seeming to suffer; from their description, "that she only complained of weakness," I presume from exhaustion. The operation was completed at 11:20 A. M., Nov. 20th, and she lived until 3 A. M. of the 21st, being nearly 16 hours.

In reviewing the history of the case after the recovery from malarial fever, and especially the cachexia, I am at a loss to understand why malignant disease did not impress itself upon my mind so firmly as to make the diagnosis clear as to the character of the growth before, as it was made at the—I had nearly said, post-mortem—it was next to it; simply an ante-mortem examination.

I am satisfied we did wrong in yielding to the pleadings of the patient for the operation, and, under the same circumstances in future, would be firm in my refusal to operate; but there is some excuse, on the other hand, looking upon the growth as non-malignant, and satisfied, from the rapid emaciation and dyspnœa, that death was certain in a very short time, and though the result was expected, yet there might be a chance of life by its removal; there certainly was none if it remained.

It is next to impossible to correctly and certainly diagnose cancer of the body, or fundus of the uterus; of the os or cervix it is comparatively easy. But when it is made, in either case, as certainly cancer in any form, even epithelioma of the os and cervix, I agree with Dr. A. Reeves Jackson, of Chicago, in his recent very opportune and conservative address on "Extirpation of the Cancerous Uterus," before the American Gynæcological Society, at its meeting in Philadelphia, Sept. 18, 19 and 20, 1883.

Dr. Jackson summarizes thus:

1. "Diagnosis of uterine cancer cannot be made sufficiently early to ensure its complete removal by extirpation of the uterus.

2. "When the diagnosis can be established there is no reasonable hope for a radical cure, and other methods of treatment, far less dangerous than excision of the entire organ, are equally effectual in ameliorating suffering, retarding the progress of the disease, and prolonging life.

3. "Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering—except in those whom it kills—nor gives reasonable promise of permanent cure in those who recover. Hence it fails in all the essentials of a beneficial operative procedure, and *should not be adopted in modern surgery.*" Italics mine.

In cancer of the cervix, I think the doctor is in error when he says it cannot be made sufficiently early to ensure its complete removal by extirpation of the entire organ; but its extirpation is of itself too dangerous to risk, even if the entire removal of the disease was the result. In his third proposition he is again in error, when he says it "never lessens suffering except in those it kills." If they survive the operation the suffering is abolished until the return of the disease. This I have a knowledge of in one case that was exempt from suffering for three months, when the disease returned, and the woman suffered as before, until death finally relieved her *permanently*, which I believe is the only certain and permanent relief for any case of *true uterine cancer well developed.*

I have treated several cases of cancer of the cervix by curette and caustics, and prolonged life, and lessened to some considerable extent the suffering; and in one case was urged by the patient to remove her womb, and refused. But in this case, as in the others, the diagnosis was certain. But in the case here reported, cancer had only dimly floated in my diagnostic calculations. Though I regret the operation was not abandoned when the true nature of the growth became known, yet I have no reprovings of conscience on the score, for I know we did not shorten her life over twenty-four hours, and we gave her sixteen of ease and comfort, which was more than an equivalent for all the time she would have lived and suffered "a living death."

The tumor, after being conveyed seven miles in a buggy, weighed 18 pounds. Much of it was detached and lost. I think it would have weighed, as tumor and uterus, without regard to fluid contents, at least 25 pounds, or perhaps 30 pounds. It was sent to the Museum of the Medical Department of University of Louisville, Ky., and handed over by my friend, Dr. D. W. Yandell, to Dr. H. A. Cottell, for microscopical examination, who has very kindly furnished me a synopsis of its microscopic structure, as follows:

March 7th, 1883.

DEAR DOCTOR:—Dr. D. W. Yandell is out of the city, expecting to be absent for six weeks. Your postal of February 23rd, with the tumor, has been referred to me by Dr. W. O. Roberts. I will submit the specimen to microscopic examination, and report results as soon as practicable.

Yours very truly,

H. A. COTTELL.

LOUISVILLE, KY., March 21, 1883.

S. P. THOMAS, M.D.:

Dear Doctor:—A microscopic examination of the pathological specimen received from you February 23rd, 1883, warrants the following statement: The large, denser mass is a fibroma (the uterus itself). The softer, appendant portion is sarcoma, of the small round cell type. The latter is commonly called encephaloid sarcoma, and with the exception of the alveolar variety, is the most malignant of the sarcomatous growths.

Yours very truly,

H. A. COTTELL.

In conclusion, gentlemen, some apology is perhaps due you for the imposition upon your time and patience of this long report of two unsuccessful cases in surgery. But they were reported first because they were unsuccessful, as I believe it is the duty of surgeon or physician to take more pains in reporting his failures than his successes, because the latter are much more certain to report themselves, and the former are seldom heard of; and a report of the latter may

deter others from a procedure that would have the same result, if not teach them to improve on your methods or avoid your blunders and mistakes. At least I am certain if all operations in this comparatively recent field—abdominal and pelvic surgery—or operations involving the opening of these cavities, were more faithfully and truthfully reported, not only the statistical tables would be more reliable than they are at present, but many might be prevented from encouraging the evident, bold, and often reckless tendency of the present day surgery. The case of ovariotomy is reported because of the evident cause of death aside from the operation; and the case of hysterectomy specially on account of the errors in diagnosis, and to condemn it and all similar operations; and because, as far as my observation extends, and that of several well posted surgical statisticians, it is the first laparohysterectomy ever performed in the State of Kentucky; certainly the first reported.

CORONERS AND MEDICAL EXAMINERS IN CONNECTICUT.

BY GUSTAVUS ELIOT, A.M., M.D., NEW HAVEN, CONN.

Perhaps nothing has occurred during the past year of more general interest to the medical profession in Connecticut than the enactment of a new law concerning coroners. The desirability of a change in the methods of conducting inquests had long been apparent, when in May, 1879, the subject was brought to the notice of the Fellows of the Connecticut Medical Society. At that time the President, Dr. C. M. Carleton, of Norwich, in his annual address, called the attention of the Fellows to the facts, that the conduct of coroner's inquests had long been a subject of ridicule and contempt, and that Massachusetts had lately made radical changes in the laws governing these proceedings, which had gone far toward the reformation of abuses. He therefore recommended the appointment of a committee to examine the workings of the Massachusetts law, and "to urge upon the legislature of Connecticut the necessity for reform in the same direction." Accordingly, a committee of three was appointed, the members of which were instructed to investigate the adaptability to Connecticut of the Massachusetts system, and to report at the next annual convention. They were also authorized to visit Massachusetts for the purpose of studying the practical working of the system, and to bring the subject before the legislature.

The ancient law, to which Dr. Carleton alluded so irreverently, empowered "any justice of the peace" to cause to be summoned "a jury of twelve judicious men," "to enquire of the cause and manner" of death of any person who shall have come to a sudden or unnatural death, or should have been found dead, the manner of whose death was unknown. The verdict of this jury was required to be presented to some justice of the peace, who in turn was required to return it to the next Superior court in the county. Small fees, none of them exceeding one dollar, were established, which were paid from the town treasury. Slight penalties were prescribed for neglect on the part of officers in serving warrants, as well as for failure on the part of those summoned as jurors, to appear and serve. Provision was made for enforcing the attendance of witnesses, and for taking testimony, in the same manner as in criminal prosecutions before justices of the peace.

The committee, whose appointment has been mentioned, reported at the annual meeting of the Fellows of the Society in 1880, that they had visited Boston, and had enjoyed every facility for examining the system of medical examiners in successful operation there. They were thoroughly convinced that it was a most excellent one, and very much to be preferred to the present coroner system; and yet, strange to say, they concluded that "it was not at present advisable to attempt the introduction of the system into this State," and that "it would have been ill-advised to have brought any bill pertaining to the subject before the last State legislature." This report was accepted, and the committee discharged. But the agitation was not destined to end here.

Two years later, at the mass meeting of the members of the Connecticut Medical Society, Dr. George L. Porter, of Bridgeport, again introduced the subject. At the conclusion of an essay on the "Recognition of Death," Dr. Porter urged that "the community should recognize that it is an unscientific distribution of political power to elect or appoint any one to the office of coroner who is not a medical man of good standing;" and that "the State should change its present laws, under which the vagaries of 'crowners' quest law' have been possible; a method which has long since been recognized as ill adapted to its purposes, and which in practice is neither economical, wise, nor satisfactory, and in its place enact some ordinance by which the first official duties to the dead shall devolve upon properly constituted medical inspectors."

A resolution was passed unanimously "that a committee of five be appointed by the President, charged with the duty of bringing before the attention of the next legislature of the State the great importance of a change in the laws providing for the detection of crime, and particularly to change the laws respecting the appointment and duties of coroners, and to advocate the appointment of medical examiners."

The subject at length came before the legislature, at the January session, 1883, and the new law was finally approved May 1, 1883.

The provisions of this law are substantially as follows: The judges of the Superior court, every third year at their annual meeting, shall appoint for each county, upon recommendation of the State's attorney for the county, "a coroner, who shall be an attorney at law residing in the county, familiar with criminal practice and medical jurisprudence." He may, for cause shown, be removed by the judges, and the vacancy filled by them as in the first instance. He is required to furnish a bond of $3,000 for the faithful performance of the duties of his office.

"The Coroner shall appoint for each town of the county an able and discreet person, learned in medical science, to be Medical Examiner." Each Examiner is required to give a bond of $1,000 to the

Coroner for the faithful discharge of the duties of his office, and holds his office at the pleasure of the Coroner.

"When any person shall come to a sudden or untimely death, and when any person shall be found dead, the manner of whose death is not known, any one who shall become aware of such death shall forthwith report the same to the Medical Examiner of the town in which the dead body lies," who shall immediately proceed to view and take charge of the dead body.

If, upon examination and inquiry, the Medical Examiner is satisfied "that the death was not caused by the criminal act, omission, or carelessness of another or others, and that there are no suspicious circumstances attending the same," he shall give a certificate of death in the usual form to the Registrar of Vital Statistics. He shall also mail or deliver to the Coroner of the county a certificate that an inquest is unnecessary.

If, on the other hand, the Medical Examiner is suspicious that any one is criminally responsible for the death, "he shall as speedily as possible, by telegraph, telephone, or otherwise, notify the Coroner for the county of such death, and of the place where the dead body is lying. Whenever the Coroner has such notice, he shall at once, and on other notice may, proceed to view and take charge of the dead body, and make all proper inquiry respecting the cause and manner of the death." If he concludes that no one is criminally responsible, he shall return a certificate of death to the Registrar of Vital Statistics. If, on the contrary, he has reason to suspect such responsibility on the part of any one, "he may cause an examinatiou or autopsy to be made of the body by the Medical Examiner, or by some other competent surgeon or physician," who shall render a written account of everything which is likely to throw any light upon the identity of the body, or upon the time, manner, and cause of death. "Should the Coroner deem it necessary, he may by warrant cause a jury of six judicious men of his county to be summoned before him, to assist him in his investigation." These men the Coroner shall instruct in their duties, and as to all points of law that may arise at the inquest. He also "may order any inquest or any part thereof to be held in private, in which case only the persons by him designated shall be allowed to remain in the room or place where such inquest is being held." If the verdict in any inquest charges any one with having caused the death which is the subject of the inquest, the Coroner shall at once communicate the import of the verdict to the prosecuting officer of the town or city in which the death occurred. He shall within ten days return to the clerk of the Superior court the testimony of the witnesses, his own report, and the certificates sent him by the Medical Examiners. He shall, in addition, keep a complete record of all certificates made by the examiners, of all investigations made by himself, and of all testimony given before, and verdicts rendered by, juries or inquest.

Extensive powers are granted to the Coroner in regard to the summoning of witnesses and causing arrests in order that no means may be neglected of detecting those who are criminally responsible for unnatural deaths. In cases where wounds and injuries are received for which others are responsible, if death threatens, the Coroner shall take the statement of the person concerning the manner in which and the person by whom the injuries were inflicted If, in any case, it appears necessary to the Coroner to have a chemical or microscopical analysis, or other scientific investigation, for the purpose of ascertaining the cause of the death of the person on whose body he is holding an inquest, he shall so report to the State's attorney of his county, who may order such analysis or investigation to be made.

The medical examiners receive ten cents a mile for travel, five dollars for an external examination and twenty dollars for an autopsy. The Coroner receivcs fifteen dollars a day when necessarily employed, and forty cents a page for making the necessary records and copies. These fees are paid from the State Treasury, the bills therefor having first received the endorsement of the State's attorney.

The most striking feature of the new system is the marked tendency toward centralization. This is made apparent in the first place by the withdrawal of the authority of holding inquests from the numerous local officers elected by the voters of each town, and the placing of it in the hands of a few (eight) men who are appointed by the judges of the State. The fact that the appointments are made upon the recommendation of the State's attorneys, thus making the whole system, directly subordinate to the prosecuting office of the county, points in the same direction. Another striking feature of the system is the exceedingly insignificent position occupied by the Medical Examiner as contrasted with the unusual range of action granted to the Coroner. While the latter officer can be removed by the judge "for cause shown," the Examiners, on the other hand, hold office "at the pleasure of the Coroner,"—a strangely uncertain tenure of office. Even where an Examiner has undertaken an investigation the Coroner may at any moment interrupt the inquiry and take entire charge of it himself. If the Examiner finds reason to suspect criminality the Coroner still has the privilege, if he sees fit, of returning a certificate of death from natural causes, as if he were more competent than a physician to determine the cause of death in a doubtful case. Not even is the making of an autopsy ensured, as a definite prerogative, to the lawfully appo nted Medical Examiner, but here again the Coroner may supersede him by calling upon some one else to do it.

The law went into practical operation about the first of July. Time will undoubtedly show its defects, and, if it has any, its advantages.

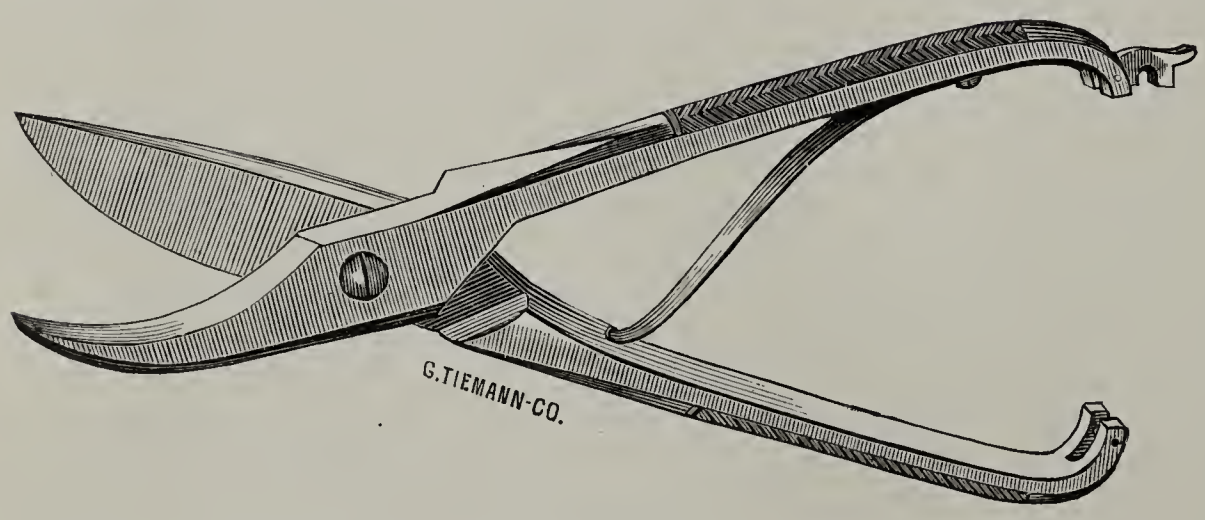
THE COSTATOME IN EXCISION OF THE RIB.

J. F. BALDWIN, M.D., COLUMBUS, OHIO.

Being called upon recently to excise a portion of a rib, in a critical case of chronic empyema in which closure of the pus cavity, which I had previously freely opened, was prevented by inability of the chest

wall to further retract, I took occasion to review the different methods in vogue for the performance of this operation.

The incision through the flesh is of course easy; nor is the peeling off of the periosteum difficult, but it is not so easy to cut through the bone and at the same time not injure the soft parts. The chain saw, the Hey saw and the trephine are the means usually employed to cut the bone, the soft parts being held aside meantime by retractors or by a strip of leather, pasteboard or flexible metal passed behind the rib. None of these methods, however, are free from objections, chief among which are the time required, the difficulty of protecting the soft parts, and the necessary presence of more or less bone dust in the wound. The ordinary bone forceps or cutting pliers, is better, but its points are objectionally sharp, while its shape is such that the blade cannot be easily passed between the ribs, especially when they are closely approximated as in the retracted thorax of chronic discharging empyema. I therefore hit upon the *costatome* as being entirely efficient, and at the same time free from all objections. The costatome, a cut of which



appears herewith, is furnished with the more complete post-mortem cases, and is designed for opening the thorax.

The operation alluded to was performed July 26, 1883, with the assistance of Dr. N. R. Coleman, of this city, and Dr. S. L. McCurdy, of Dennison, Ohio. The usual incision was made and the periosteum peeled off; the blunt lower jaw of the costatome was then forced in below the rib and then up behind it, when the jaws were closed, and all present were surprised at the ease with which the bone was severed. The jaws of the instrument were again opened and pushed along the rib to the other extremity of the incision, when on closing them the operation was completed.

Owing to the spongy structure of the bone with its diploe, and to the peculiar cutting angle of the instrument, the rib is severed with much greater ease than is the phalanx in amputation of a finger with the bone pliers.

I may add, in passing, that the patient, although greatly reduced by five months of suppuration, rallied promptly after the operation; in six weeks the cavity was entirely closed, and at present the patient is, apparently, as sound and well as ever.

MEDICAL PROGRESS.

POISONING BY CAUSTIC ALKALI—FEEDING BY RECTUM FOR 49 DAYS.—Dr. McDougall, in charge of the Kulangzu Hospital, Amoy, furnishes the *Customs Gazette* with the notes of a case of attempted suicide in a woman, by swallowing an ounce of caustic alkali. Vomiting ensued almost immediately, the vomited matter containing a good deal of blood. Three days later the patient was admitted into the hospital very weak and pale, eyes sunken, and lips, tongue, palate, and uvula covered with sloughs. Deglutition being impossible, she was given frequent nutrient enemata, amounting in the day to fifty or sixty ounces of beef tea, eggs and milk. The enemata were retained for three or four hours. After the mouth and throat got well the patient made frequent attempts at deglutition, but without success. On the 45th day a small sized bougie (after many unsuccessful efforts) was passed through one stricture at about the level of the thyroid cartilage, but after passing six inches beyond this point it stopped, and subsequent attempts at getting it lower proved fruitless. On the 49th day the patient for the first time swallowed a little congee (?) and milk; this was followed by great pain in the stomach. The quantity was increased every day, until a week later she swallowed a large tumblerful of beef tea and the same quantity of milk. The rectal injections were continued. Her master took her away the next day, and four weeks later came the news of her death. It is most probable that the cestation of nourishing enemata, and the absence of any sufficient food that she could swallow, simply brought on death by starvation. She lived for 49 days without swallowing the smallest quantity of food, either fluid or solid, and derived so much nourishment from the enemata that she actually gained in weight.

NOTES ON AN EPIDEMIC DISEASE OBSERVED AT PAKHOI.—Dr. J. H. Lowry, in the *Customs Gazette*, gives a general consideration of the history of *bubonic plague*, as given by various authors, and as preliminary to his clinical notes of ten cases of an epidemic disease, which he considers as being closely allied to the bubonic plague. The population of Pakhoi, where his cases occurred, is set down at 25,000. The mortality was between 400 and 500 during three months, *i. e.*, from the end of March to the end of June, 1882. He describes the hygienic condition of the town as exceptionally bad, the streets in an abominable condition of filth, not the slightest attempt at cleanliness; the privies open, and placed, for convenience, in the most frequented parts; every house damp and foul, and the floors excrement-sodden. He gives the symptoms of his ten cases, out of which two recovered, in the following order: 1. High fever. 2. Glandular swellings or buboes, varying in size from a large betel nut to a hen's egg; seldom more than one present; hard and painful; do not suppurate;

groin most frequent site. 3. Sallow hue of skin. 4. Heavy odor from breath. 5. Pulse small and weak. 6. Bilious vomiting. 7. Most cases great prostration. 8. Tongue varied; mostly dry, white fur. 9. Sordes on teeth and lips. 10. Delirium. 11. Restlessness. 12. Respiration somewhat hurried. 13. Bowels loose; fetid odor; no diarrhœa. 14. Præcordial oppression. 15. Thirst not intense. 16. Drowsiness passing to coma. 17. The young more frequently attacked. 18. Incubation appears short. 19. No eruptions were observed. 20. Great mortality among rats; no other animals attacked.

He regards this as a filth disease, and influenced by high temperature; during its prevalence the thermometer averaged a day temperature of 85°, and a night temperature of 76°. He classes it as a specific contagious fever, of short duration, accompanied by glandular swellings, and very fatal. On first seeing the cases they resemble closely typhus fever.

The Preservation of Bodies.—Dr. J. Polak, of Warsaw, has for some time past been employing an aqueous solution of sublimate for the preservation of cadavera. It is used in the proportion of 1 to 500, or 1 to 300. He claims that better results are obtained from the employment of this salt of mercury than from thymol, as ordinarily used, *i. e.*, thymol 3 parts, glycerine 2,000 and water 1,000; and that, being at the same time much cheaper, it is to be preferred. The injections are made in the ordinary way, through the carotid or femoral artery, and no special appliance is needed.—*Medical Press.*

Marked Reduction of Temperature after Hæmorrhage into the Medulla Oblongata.—Dr. C. Lemeke reports a case (*Deutsches Archjo für Klin. Med.*) as coming from the medical clinic of Prof. Thierfelder, where there was primary hæmorrhage into the medulla oblongata, followed by a most remarkable reduction of temperature.

The patient was 38 years of age, a blacksmith and a drunkard. His habits were uncleanly, his abode unhealthy and his nutrition poor. On October 24 he came home drunk and went to bed. October 26 his wife reported that he no longer recognized her; could not speak or swallow, but had rattles in his throat and froth came out of his mouth. He was brought to the hospital on a stretcher, when a record of his case was taken. No deformity in the robust body; no bloat in the face; cheeks red; good color to the mucous membrane; no smell of liquor, but a most remarkable coldness to the skin of the whole body, feeling like a cold corpse; no cyanosis or œdema, even in the parts pressed upon in lying. With this was a remarkable diminution in the frequency and force of the heart's action, The radical pulse was altogether wanting; the carotid pulse was very feeble; the number of beats of the heart as marked at the apex was 38 per minute; the breathing was labored and stertorous, but regular, 18 per minute. No ptosis; on the left conjunctival bulbi acuti an ecchymosis of the size of a small pea; left pupil a little more contracted than the right, both reacting sluggishly on exposure to light. Cervical muscles pliable; no enlarged glands; reflex irritability more marked on the right side; the sensorium deeply affected; the patient answers no questions; loud calls arouse him momentarily; the eyes stare into vacancy, and no notice is taken of what goes on about him; the limbs are passively limp; swallowing is not possible.

After having been given a bath of 28° C., for cleanliness, and placed in a warm bed, the thermometer, at 9 P. M., was placed in the rectum for a distance of 6 centimeters and remained there 15 minutes, when it registered exactly 23° C. After the bladder had been emptied, and an enema given, which brought away hardly any fœcal matter, about every six hours stimulant enemata of port wine and camphor were administered, with subcutaneous injections of æth. sulph. The thermometer gave the following record:

October 27, 2 A. M., 25.5° C. (rectum); 7 A. M., 26° C, (rectum); 10 A. M., 26.7° C. (left axilla—in place for an hour); 2 P. M., 27.5° C. (rectum); 5 P. M., 27.7° C. (rectum); 9 P. M., 28° C. (rectum).

Heart beats, October 27, A. M., 32 per minute. About 10 A. M. the respiration became of the Cheyne-Stokes character. Arms flexed to a right angle and contracted; shoulders limp; legs limp, no contraction; on grasping them, especially the left, there is evident appreciation of pain; the reflex irritability of the left has became less marked; urine passed in bed; towards evening the heart beat 40 per minute, and death took place at 11:45 P. M., with apparent œdema of the lungs.

The post-mortem made twenty-four hours later was very thorough; the interest centered in the brain and medulla; a considerable amount of clear serum was found in the subarachnoid space; the pia mater was lifted up into bullae by the underlying serum; the medullary and gray substances of the brain were strongly injected with blood; ventricles not abnormal. The medulla was carefully removed and examined by transverse sections. The first important change was noticed 7 mm. below the calamus scriptorius, where there was marked hyperaemia and dilatation of the vessels on the left side; further to the left from the central canal and from the caput column post, were the vessels doubled in size and filled with blood—no hæmorrhage. From this locality to the middle part of the medulla oblongata, the hyperaemia became less marked until nothing abnormal was seen beyond a slight thickening of the tissue about the central canal. The transverse sections through the middle portion of the medulla, which showed clearly, delineated the nuclei of the hypoglossal and accessory nerves, gave their cells as unusually markedly pigmented, especially the left. From here on the hyperæmia became more marked again with each transverse section until at the left side, near the median line and on the surface of the floor of the fourth ventricle, were the first traces of a fresh hæmorrhage, which led to a deposit further on, which lay more to the left of the median line, and 1½ mm. beneath the floor of the fourth ventricle; it was 4 mm. in extent, from the middle of the olivary body to the point of the alacinerea, extending from the before

mentioned depth to directly under the ependzma of the fourth ventricle, pressing it upwards, its breadth measured 1-1½ mm. Relatively, it was placed lateral to the nucleus of the bulb, above the nucleus of the vagus and somewhat below the median portion of the nucleus of the auditory nerve. The examination was carried further with interesting results, but as the question here has reference more particularly to the relation between the hæmorrhage in the medulla and the lowering of the temperature, it is not necessary to give further details.

Here is the case of a man who within three days of his death showed no special change in his physical condition from that of a previous indefinite period; he suffers from primary hæmorrhage of the medulla oblongata, and his case is classed as acute apoplectiform bulbar paralysis, which is recognized as such through the complete anarltine (injury to the N. hypoglossus), the dysphagia (affection of the nuclei of the Nn. hypoglossus, glosso-pharyngeus and vagus-accessorius), the diminished pulse-rate (irritation of the nucleus N. vagi), the labored respiration, which became of the Cheyne-Stokes form (symptoms of a clot in the immediate neighborhood of the respiratory center), and the enfeeblement of motor force in the extremities, which Nothnagel considers as often the only symptom of a bulbar clot. The extraordinary lowering of the temperature gives rise also to the conclusion that certainly the locality of the lesion was in close connection with the seat of the thermic centre.

SUPPRESSION OF URINE FOR EIGHTEEN DAYS.—A fatal case is reported from Warsaw of a railway conductor, 45 years of age. The patient was admitted into the Child Jesus Hospital, Warsaw, on February 8, of the present year. He had then suffered for five days with complete anuria. From time to time one or two drops of mucus had passed the urethra. For two days no movement of the bowels had taken place; there were meteorismus, eructations, dull pain in the kidney region, headache, sleeplessness and restlessness. The patient attempted to evacuate urine three or four times in the hour, but without success. The pulse was weak, 100; temperature, 37 (C.); no urine came away on passing the catheter. Warm irrigations of the bladder, purgatives, extraction of blood from the kidney region, and warm baths produced no alteration. On the 12th of February vomiting set in, which lasted several days. The catheter was passed every second day, but yielded no urine. The vomiting became more frequent, and pyrexia set in, 38.50 (C.). On the 21st of February, for the first time, an ounce of urine was passed, and on the 22d, one and one-half ounces. The patient became still worse, and died on the 23d, after eighteen days of acute suffering. The autopsy showed widening of the calyces. In both ureters calculi were found, which completely prevented the passage of urine. The bladder was empty and contracted. No mention is made of uræmic (so-called) convulsions.—*The Medical Press.*

POISONOUS FISHES.—We find in the *Memoires lus a la Société de Biologie*, an article by Ch. Remy, on the poisonous fishes of Japan. The article is not yet complete, but so far as published, it embodies the results of valuable researches. It appears that in Japanese waters there are no less than twelve varieties of fishes that are suspected or known to be mortally poisonous. Five of these are so virulent in their poisonous effects that their sale is interdicted by the Japanese government. The Japanese give them the name of *fougou*. Their flesh is exquisite in flavor, and their poisonous qualities are most developed in the spring time. The scientific name given to them is Tetrodon, and they are also found at New Caledonia. M. Remy conducted a series of experiments on animals with these fishes, by feeding and injecting subcutaneously the flesh and viscera, watching the symptoms and noting the post-mortem evidences, from which he concludes that the poison resides exclusively in the genital organs, and principally in the ovaries; and further, that the toxic force of the fish is proportional to the development of the genital organs. The second part of his article, which is not yet completed, refers to the clinical history of cases of poisoning by these fishes in man.

SPIRITUS ETHERIS NITROSI.—Dr. D. J. Leech, not being satisfied with the scanty physiological and therapeutic records of this drug, has undertaken to define its effects more clearly and positively, and in the *Practitioner* gives the results of his investigations, as proving it to be a distinct depressor of arterial tension; finding that 100 minims of spiritus etheris nitrosi given to a healthy man invariably indicates in the sphygmographic pulse-tracing, a marked fall in arterial tension, and that this decreased tension lasts for two or three hours. Its action is evidently analogous to that of nitrite of amyl, and it probably influences the same tissues. As a diuretic, its success is due to its tension-reducing effect, and this also explains its failure as a diuretic in cardiac dropsy. In elderly people, its chief value would lie in counteracting the increased tension consequent upon tissue degeneration. The connection between its influence on tension and its diaphoretic effect, may enable us to judge of the probability of its u efulness as a diaphoretic in individual cases. It is evident that it may cause a tense small pulse to become fuller and stronger to the feel, and quicker. The heart's beat, too, may become perceptible to the patient under the influence of the ether, as it often does after the exhibition of amyl nitrite; and the change which it effects in the circulation may also account for its utility in certain nervous symptoms in children, to which Wood calls attention.

NOTES ON THE ADMINISTRATION OF QUININE.—As the result of the experience of a practice of eleven years in Rome, Dr. David Young gives (*Practitioner*) his experiences with this drug, especially detailing two cases. One an English lady, aged sixty years, who returned to her hotel cold, wet and tired after an exhaustive day's sight-seeing. The physician called in attendance considered the symptoms present and suggested the use of quinine, which was ordered (bisulphate) in six grain doses every four hours. After the fourth dose, headache increased, noises in

ears and deafness. After the sixth dose, violent nose bleeding. After the seventh dose, convulsions, followed by death. The second case was in a young Englishman similarly affected, who was ordered the drug in eight grain doses every six hours; the second dose produced marked cinchonism, and during the night he became wildly delirious, which continued until the third day the quinine was stopped; the bowels which had been bound for 48 hours were evacuated by the use of calomel, and the urine, previously very scanty, discharged freely, when sleep ensued, with freedom from delirium. The case proved to be one of typhoid fever. Dr. Young summarizes other cases, and concludes as follows:

I. Never give quinine in antipyretic doses in cases where the bowels are confined and the secretion of urine is scanty.

II. In cases where it is being administered and an increase of dose is desirable, this may be safely done if the skin, bowels and kidneys maintain their normal functional activity.

III. In many cases of remittent and intermittent fever, the combination of the drug with the chloride of ammonium or a salt of potash or soda, is likely to be more easily tolerated as well as more useful, than if it be administered in a pure form.

IV. During the administration of quinine, should a headache come on or increase in intensity, the case requires the most careful attention.

On the Action of Agaricin in the Night-sweats of Phthisis.—The agaricus albus, of now almost obselete reference, as growing upon the larch in the old country, and considered as an active purgative, has been recently brought into use from the fact that the chemists have extracted the active principle, in the form of long needle shaped crystals to which the name has been given of Agaricin. Andrel found the agaric in powder in doses of eight grains, gradually increased to a drachm, useful in the night-sweats of phthisis. And now Dr. Otto Seifert calls our attention in the *Weiner Medizinische Wochenschrift* to the agaricin as used for the same purpose. It is not positive in its action and must often be given in increasing doses, but it induces sleep, relieves cough and lowers the pulse. According to Dr. Seifert's experience, a full dose exerts its influence during five to six hours, when, knowing the period for the onset of the sweats in phthisis, it must be renewed for that purpose. He gives the drug in doses of 0.004 to 0.02 gramme; and has met with success by using it hypodermically, his formula being: Agaricin, 0.05; alcohol abs., 4.5; glycerine, 5.5; producing a pretty severe burning sensation for half an hour. He gives preference to the internal administration.

THE

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PUBLISHED WEEKLY.

The Editor of this Journal would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, NOVEMBER 17, 1883.

Medical Advertising.—In reply to the questions of our Virginia correspondent, in the preceding number of the Journal, we stated with sufficient explicitness the manner in which any member of the profession could make known, both to the public and his professional brethren, that he practiced only in a limited field or department of medicine or surgery, *i. e.*, by saying on the ordinary professional card that his *practice is limited* to this or that class of diseases. If it is proper for him to put it on his card, of course he can also put it on letter-heads, or door-plate, or even on a pine board sign, so far as the action of the American Medical Association is concerned. But it must be a simple notice of limitation of business and not a claim to special or superior qualifications.

The question he has raised in regard to "sanitariums, private homes, retreats," etc., etc., is of sufficient importance to justify a fair consideration. That much special advertising has been done in this indirect manner is obvious to all. How far this advertising is in violation of the principle involved in the prohibitory clauses of the National Code of Ethics has never been authoritatively determined. As in the case of specialties, so here, the Code of Ethics makes no direct mention of such institutions. It simply prohibits the medical man from publicly offering his services to the poor gratis; from such advertising as is intended to invite the attention of those laboring under particular diseases; and from boasting of specific remedies or extraordinary cures. Neither has the ethical relations of this class of institutions ever been determined by any direct action of the American Medical Association. Consequently,

our learned confréré at Richmond could analyze the various institutions to which he has alluded and determine how far their advertising contravenes the plain principle on which the prohibitory clauses of the Code are founded, with as much propriety himself, as to call on his "venerable and honored brother," to do it for him. We have no objection, however, to rendering him such aid as time will permit.

First, let us determine the nature of the sanitariums, homes, retreats, etc., etc., to which allusion has been made. There are some maladies that afflict members of the human family of such a nature that the proper care and safety, both of the afflicted and of the community, actually require special provision for their care and proper treatment. Such are most of the forms of insanity, and of those mental and physical derangements produced by the habitual use of opiate and alcoholic preparations. Positive seclusion and some degree of restraint are essential to the successful management of these classes of cases. Consequently, there is need of both public and private institutions for their accommodation. And this carries with it both the necessity and propriety of such proper advertising as will make known their existence to the profession and the public. All of which can be done without, in the slightest degree, violating any principle of ethics. So, too, the establishment of true sanitariums or places for the accommodation of invalids at certain important sanitary localities called "health resorts," is very desirable, if not absolutely necessary. But the proper advertising of these does not necessarily involve the puffing of the name or skill of any member of the profession. Aside from the institutions we have now enumerated, there are numerous others, such as dispensaries, clinics, homes, retreats, asylums, institutes, etc., for the treatment of this, that, and the other special class of ordinary diseases, under the direct charge of Dr. A, Dr. B, or Dr. C, who has "long devoted special attention" to the class of diseases invited, that are so plainly devices for inviting the attention of those laboring under particular diseases, that no one can easily mistake their true relation to the acknowledged principles of ethics. That their establishment, and the system of both direct and indirect advertising connected with them, has already done much to disgust the profession at large; to lower the standard of professional honor in the estimation of the intelligent classes of the people; and to divert large numbers of patients from the care of their proper medical attendants, will be evident to anyone who will take the trouble to investigate the subject. The time has come when the subject should receive the earnest attention of both State and national medical organizations. And as a "venerable brother" we would advise our correspondent, who is yet in the prime and vigor of life, instead of converting his house into a "private gynæcological retreat," to apply his well-known ability through that part of the medical press which he controls, to the work of creating a more active public sentiment in favor of pruning out the excresences that are plainly disfiguring the features and corrupting the morals of the profession.

UNITY OF DIPHTHERITIC AND MEMBRANOUS CROUP.—In the number of the JOURNAL for September 22d is a paper on this subject, read before the Section on Diseases of Children, by Alex. Harris, M.D., of Jeffersonton, Virginia. The paper as printed closed with the following unfinished sentence: "I have recently treated and lost a case." In reading the proof-sheets the sentence was marked as unfinished, and diligent search was made for the remainder of the manuscript, but without success. The author has sent us what was omitted, which would make the paper complete as follows: "I have recently treated and lost a case of diphtheritic poisoning, when the only local manifestation was on the skin of the hand and arm for more than a fortnight, the pharynx becoming involved only about thirty-six hours before death. More than thirty years ago a neighboring practitioner saw one of my patients in whom I had diagnosed membranous croup (without reference to the condition of the fauces), and being a disciple of Wood, declined to make a diagnosis without an inspection of the throat. To my surprise, the inspection revealed membranous deposits on the tonsils and soft palate."

SOCIETY PROCEEDINGS.

TRANSACTIONS OF THE OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting, November 1, 1883, the President, R. A. Cleemann, M.D., in the chair.

Dr. B. F. Baer related the following cases, the clinical histories of which present some points which he thinks are instructive and worthy of discussion. They are somewhat unusual in character, and remarkable that they all occurred within a period of thirteen days.

FORCEPS LABOR, FIFTH POSITION.

On October 17th I was requested by Dr. —— to visit his patient, Mrs. H., who had been in labor thirty-six hours, prepared to perform craniotomy. She was a primipara, 43 years of age.

I found the patient nervous and exhausted, the soft parts dry and rigid, the os only partially dilated, and

the membranes ruptured many hours. The head, a large one, was in the cavity of the pelvis, and, whilst not impacted, it was nearly so. The larger portion of the head was posterior and to the left, the smaller portion anterior and to the right. The fœtal heart-sounds were heard in the left lumbar region, and nowhere else. I therefore diagnosticated a left occipito-posterior, or fifth position of Baudelocque.

I placed a vectis, and endeavored to assist rotation forwards, but failed to make any impression. I next adjusted, with some difficulty, Simpson's forceps, and by traction during uterine action, with gentle efforts at rotation, allowing the forceps to turn as the occiput rotated anteriorly, that process was finally accomplished in about two hours of hard work. I now removed the blades, and after finding that the head could not be delivered without it, I readjusted the instrument and assisted in extension of the head, delivering a living child said to have weighed twelve pounds. There was no laceration of the perinæum. Both mother and child have done well. The case is interesting because of the age of the primiparous patient, and in the position of the occiput, which is rare.

ARM PRESENTATION; PODALIC VERSION.

On October 23d., Dr. ——— requested me to see a patient with him, a girl 16 years of age—a primipara at full term—in labor about twenty-four hours, and trunk presenting.

In general appearance she resembled more a child of twelve than a girl of sixteen. The external genitals and vagina were small and undeveloped. The abdomen was greatly distended, globular and fluctuating. Palpation was of only negative diagnostic value, probably on account of the large quantity of amniotic fluid. But I thought I detected the head in one iliac fossa, and and the breech in the other. Auscultation revealed the fœtal heart sounds, feebly heard in the right iliac region. The upper portion of the vagina was distended by a large protruding "bag of waters," and the os uteri was fully dilated. I could only slightly touch the presenting part, which was entirely above the superior strait. I detected what I thought to be a limb, and from what I had learned previously by inspection, palpation and auscultation of the abdomen, I believed it to be an arm. I then dilated the orifice of the vagina preparatory to passing my hand, should that be found necessary, after rupture of the membranes, which I now did, and found a shoulder presenting and an arm on the verge of passing the os. This I arrested, and made version by the feet. I preferred this to version by the vertex, because I deemed it easier and less dangerous to both mother and child to effect delivery in that manner, than to apply the forceps in this special case. The child was alive, but feeble. The body passed through the narrow vagina very slowly, and only after pressure on the fundus of the uterus, until the head reached the floor of the pelvis. Here by assistance, the occiput rotated forwards and the head was arrested. Flexion of the head could not be made to occur by supra-pubic pressure, and by pressure upon the nape of the neck, whilst a finger or two acted upon the anterior surface of the head through the rectum. I then quickly adjusted the forceps, and carrying the handles forward with the body of the fœtus, made flexion and delivered a living child. There was not the slightest laceration of the perinæum.

The uterus did not contract well; and although ergot was administered, and time given for the organ to recover its tonicity (thorough kneading being used meanwhile), when the placenta was expelled a smart post-partum hæmorrhage followed. This was easily controlled by the application of pure vinegar to the cavity of the uterus, injected by means of the long-nozzled uterine syringe, which holds about half an ounce. I prefer this method of introducing the vinegar to any other, for the reason that it is more easily and thoroughly applied. I carry the nozzle, guided by the index finger, as in the introduction of the sound, into the uterine cavity, and project the vinegar, without force, over the surface. This can be repeated if necessary, which is seldom. Too much praise cannot be accorded Prof. Penrose for his earnest advocacy of the use of vinegar in the treatment of post-partum hæmorrhage, the result of uterine inertia. In my experience, it has never failed to secure firm and continuous contraction, when properly applied. It is simple, antiseptic, and harmless.

ARM PRESENTATION; PODALIC VERSION.

October 29th, Dr. —— sent for me, stating that he had a case of shoulder presentation, that the membranes were ruptured, and the os only partially dilated. He had attempted to make version by the feet, and had brought down an arm in mistake for a foot. I found a primipara, æt. 22 years, illegitimately pregnant, at full term, feverish and excited. A large, fat right arm occupied the vagina, and the shoulder was jammed into and projecting through the os, which was firmly contracted around it. It was a dorso-posterior position, and the head was in the right iliac fossa. All the liquor amnii had been drained away, and the uterus was closed tightly around the child, which was apparently dead.

We administered ether, and I at once began an effort to bring down a foot, deciding that version by the vertex here could not be made, because the arm could not be returned to the uterine cavity, and, even if the arm had not been down, I feel sure that the bi-polar force would not have been great enough to have brought that head to the superior strait. But to get through the narrow vagina and rigid os, which were filled already by the arm and shoulder, was one problem, and another, apparently greater one, was the turning of the large child in a contracted uterus. An attempt was, however, not only justifiable, but obligatory, for the sake of the child, of whose death we were not sure. Then, embryotomy, in a case of this character, would, I believe, have been attended with greater danger to the mother than version. I gradually inserted my hand and carried it into the uterine cavity, and with it I tried again to replace the arm, but failed. My hand was now so benumbed that almost all sensibility was lost. However, I finally reached the feet, selected the uppermost or left one, and began my efforts at version, assisting all my

internal manipulations, of course, by placing the external hand on the abdomen, and acting with it on the opposite pole of the child. When I made traction on the leg, the arm advanced further into the vagina, and it now seemed that I should certainly be compelled to give it up, the difficulties appeared so great. But patience and perseverance are cardinal virtues here, and by exercising them to my utmost capacity, I succeeded in getting the foot and leg into the vagina, where I secured them with a fillet. I now gave this to Dr. ———, and whilst he made traction upon it, I pushed upon the shoulder, and succeeded finally in revolving the child on its long axis, causing the arm to ascend, and the leg to occupy its place in the vagina. The remainder of the delivery was that of a difficult breech case, where traction on the child and pressure upon the fundus of the uterus are imperative. The child was dead. The mother reacted well, and has not presented an untoward symptom. There was slight laceration in the sulci on either side of the vagina, not through the cutaneous surface, and not enough to require suturing.

BREECH PRESENTATION.

Twenty-four hours later, on October 30th, my friend Dr. Wm. L. Taylor requested me to see with him Mrs. X., a primipara 35 years of age, who had been in labor 24 hours, the breech presenting in the left sacro-posterior position. The membranes had ruptured twelve hours previously, the os was rigid, and only slightly dilated, and the breech was impacted in the superior strait, which seemed to be narrow. The patient was short of stature, fat, and had a small vagina. It was thought that the child was dead, but of this we were not sure.

Was there any use in waiting longer for nature to effect delivery? We decided that there was not, and, I believe, correctly. An attempt at traction was made by acting on the thigh, but it was futile. I passed my hand with great difficulty into the cavity of the uterus, which closely surrounded the child, and endeavored to reach a foot, but found that the legs were extended; and it was only after I had advanced my hand absolutely to the fundus of the uterus that I secured the desired member. The uterine cavity was now so rigid and full that it appeared impossible to flex the leg and extend the thigh. But here perseverance again succeeded, and the leg was brought into the vagina. Delivery was finally consummated by the greatest effort. The child was dead, and from appearances had been so for some hours, as Dr. Taylor had suspected. The mother recovered as after an ordinary labor.

PUERPERAL CONVULSIONS.

A few days before, October 21, there entered my service at the Maternity Hospital a girl, 18 years of age, illegitimately pregnant, and near term. She presented a depressed appearance, and was pale and puffy from œdema. Her urine was examined at once and found to contain a large quantity of albumen and some casts. Her labia minoræ were so œdematous that she walked with difficulty.

She was placed upon a treatment consisting of Basham's mixture, digitalis, laxatives, and warm baths, with good food. On the 20th, the nymphæ were so greatly distended that I feared obstruction to delivery, which was about to take place; I therefore made about a dozen small punctures over their surfaces. This was followed by a very free discharge of serum, so that in the evening the labia were reduced more than one-half. During the night, labor occurred, and she was delivered naturally at seven A. M. on the 21st, having been attended by my assistant, Dr. J. P. Pyle. There were no symptoms during the labor nor immediately after it to attract attention, but before leaving her he administered thirty grains of the bromide of potassium as a safeguard.

At 9 o'clock he was hurriedly called, and found her just recovering from a convulsion. He at once sent for me, and began the administration of chloroform. But before I reached her, at 10 o'clock, she had had two more seizures, and just as I entered the room she went into another, which was one of the most terrific convulsions I have ever witnessed. I immediately opened a vein, and allowed about sixteen ounces of blood to flow. I confess that I did not want to take blood from this patient, because she was in such an apparently low condition. The bleeding did not seem to have the slightest effect, for very soon after it she had another convulsion fully as severe as the one preceding. Since the first attack there had been given, per rectum, twenty grains of the hydrate of chloral and forty grains of the bromide of potassium, and, per os, one-fourth of a grain of elaterium. But the convulsions continued to recur, unless the patient was kept constantly under chloroform, and coma was deepening with each attack. I now injected, hypodermatically, three-fourths of a grain of the sulphate of morphia. This was at 11:30 A. M. She did not have another convulsion, although no more chloroform was administered until 2 P. M. At this time she had a slight one, and at 2:30 another much more severe, when I repeated the dose of three-fourths of a grain of morphia. After this she had no more convulsions. The dose of elaterium was now repeated, and the kidneys stimulated by large doses of saline diuretics, administered by the rectum. The bowels moved freely and repeatedly soon after the last dose of elaterium was given, and the kidneys responded promptly; but the urine became nearly solid, when the test for albumen was applied, and casts were so numerous, and of such a character, that an unfavorable prognosis was pronounced by the competent microscopist who made the examination. The patient, however, came gradually out of the profound coma, but did not recover consciousness until nearly three days had elapsed, becoming at times wildly delirious and maniacal. As soon as she could swallow, I resumed the administration of Basham's mixture and digitalis, and on the next day added quinine and ergot, the latter especially to restore tone to the capillaries, and thus assist in improving the condition of the brain. Milk and beef tea were given largely. The patient will leave the hospital to-morrow, although her urine still contains albumen in considerable quantity.

If uræmia is ever the cause of eclampsia (which is not settled), this case presented the kidney state

which is usually found in cases said to be of that origin.

Since it is *apropos*, I will relate a case which was probably not of uremic origin, because the urine did not indicate the slightest disease of the kidneys.

PUERPERAL CONVULSIONS.

My friend, Dr. J. B. Deaver, asked me to assist him in the delivery and treatment of a case of convulsions. The patient was eighteen years of age—a primipara, and unmarried. The occiput was posterior and in the hollow of the sacrum. The first convulsion occured after the head had passed the superior strait, and it was a very severe one. Dr. Deaver immediately bled, and very freely. Another convulsion occurred soon after the bleeding, although chloroform was administered and chloral given by the mouth. When I reached her, she had had three attacks, and was profoundly under the influence of the anæsthetic, and, of course, could not convulse in that state. I adjusted the forceps and delivered, with the occiput posterior, being unable to rotate it anteriorly. The anæsthetic was now removed, and not long after another violent convulsion occurred. I now injected two-thirds of a grain of morphia under the skin. She did not have another seizure and made an uninterrupted recovery. As stated above, there was not the slightest evidence of disease of the kidneys, either before or after labor. The cause here was reflex—the patient being predisposed by a depressed mental condition, etc.

The first indication to be met in the treatment of puerperal eclampsia should be to control the convulsions. I do not think it will be gainsaid that the prognosis becomes less favorable with each recurrence. I believe that morphia administered hypodermatically in a large dose, and repeated if necessary, is one of the most efficient means which we possess for that purpose. In the next case which I am called to treat I shall give one grain. I will bleed, if I think that is indicated, and shall use chloroform; but I will certainly give the morphia. I will then attend to elimination through the bowels, kidneys and skin. Dr. Clark, of Oswego, N. Y., first brought the morphia treatment before the profession, in a fearless and excellent paper, published in the *American Journal of Obstetrics* for January, 1880, which is worthy of study.

DISCUSSION.

Dr. Elliott Richardson thinks the extent of dilatation of the cervix a very important point in considering the advisability of version in presentation. When the fœtus is in a transverse position, it cannot descend, and as the cervix dilates, it slips upward on the neck and chest of the child, and thus puts the vagina in a condition of longitudinous tension, and consequently of narrowing. Any sudden or extreme attempt at dilatation of the vagina, when in this condition, involves a great risk of laceration. In Dr. Baer's case, the narrowness of the os uteri was a favorable circumstance for podalic version.

There is a wide difference in the treatment of puerperal convulsions, between this country and Germany. Carl Braun strongly discountenances bleeding, and recommends chloroform, with the administration of benzoic and citric acids, to assist the action of the kidneys. He considers that the prime object is to put the body at rest.

Dr. W. T. Taylor thought that in Case 2, if the method of Dr. Wright, of Cincinnati, for the correction of the shoulder presentation, by converting it into a vertex, had been tried, the difficulties and dangers of a version by the feet might have been avoided.

He does not think bleeding should ever be omitted in the treatment of puerperal convulsions, in plethoric patients. Bleed freely, and give chloral in large doses, by the rectum. He thinks the use of opium should be preceded by bleeding.

Dr. Alfred Whelen has tried ¼ grain nitrate of pilocarpine, hypodermatically, after bleeding,—the result being successful. The use of the pilocarpine did not seem to be followed by serious effusion. In one case, in which no treatment of any kind had been used, an autopsy showed all the serous cavities filled with effusion. He thought the arterial tension consequent on the convulsion, was the cause of the exudation.

Dr. R. A. Cleemann had tried all plans, and none of them were certainly successful; every method would fail at times, and any method will be followed by recovery. He thinks bleeding should be tried in every case, to remove the vascular tension, which is the great source of danger.

Dr. B. Trautmann had under his care a primipara, plethoric, who was suffering from puerperal convulsions. She was bled, a large dose of calomel was given, chloral was administered, and pilocarpine was injected, but all without effect. The patient died. In another case the urine contained 50 per cent. of albumen with casts, and no convulsion occurred. What is the relation between albumenuria and convulsions? Is the origin of the convulsion in the nervous system, and the albumenuria a result?

Dr. H. F. Beates.—The presence of urea in the blood being generally considered a prime factor, most of the forms of treatment have reference to its elimination. Bleeding should be very free, to act in that manner, and if it is prompt and free, it will be followed by improvement; pilocarpine acts as an eliminator of urea by the skin, thus relieving the kidneys and the system. He had treated two cases by this method, and both had recovered.

Dr. Philip M. Schiedt had recently under his care a primipara, aged 25 years; she had convulsions for four hours; chloral and bromide of potassium had been given freely, but with no effect; a hypodermatic injection of ¾ gr. of morphia sulphate was followed by quick relief; she was very plethoric, but there was no need for bleeding after the use of the morphia.

Dr. Baer, in Case 2, had considered version by the vertex, but thought that he could deliver more quickly, and with less danger to both child and mother by means of podalic version. He considered elimination a false principle, in the treatment of

puerperal convulsions. First stop the convulsions; eliminate afterwards, if there be any necessity for it. How much elimination can be effected by drawing twenty or even forty ounces of blood? The majority of these patients need all of the blood they have; they have none to spare. There is a neurasthenia at the bottom of these attacks. The patients are generally nervous and depressed, from circumstances connected with their physical and social condition. Dr. Penrose, at his lectures at the University, taught bleed—bleed; every case that was bled sufficiently got well; every case that was not bled, died. Dr. Carson's lecture followed immediately after that of Dr. Penrose, and he was as bitterly opposed to bleeding as Dr. P. was enthusiastic in its advocacy. He has been afraid of pilocarpine, because its action, once established, can not be controlled. He thinks, however, the effusions observed have been caused by the convulsions, and not by the remedy. Morphia, used hypodermatically, is the remedy upon which he puts dependence; it will control the convulsions. Any medicine administered by the mouth or rectum, must be of slow and uncertain action, because of the slowness of absorbtion from the alimentary tract.

DR. BEATES reported a case of DIPHTHERITIC PARALYSIS in a child of eight months. The muscles of the neck were affected, and resulted in extreme flexibility of the neck,—the head rolling all about. Death resulted apparently from paralysis of the phrinic nerve.

W. H. H. GITHENS,
Secretary.

CHICAGO MEDICAL SOCIETY.

The Chicago Medical Society held a well-attended meeting on the evening of the 5th inst., and listened to the reading of an able paper by Dr. A. Reeves Jackson, on the question, "Is Extirpation of the Cancerous Uterus a Justifiable Operation?" The paper is essentially the same as presented by the author to the recent meeting of the American Gynæcological Society, and of which the following brief abstract has been furnished us:

In medical and surgical practice, the results obtained from any means or method of treatment are proper tests by which their value may be judged. And, in accordance with this principle, whenever any therapeutic agent has been found, after adequate trial, to generally fail in effecting the purpose of its use, or to be habitually dangerous to health or life, candid and honest men have ceased to employ it.

During the past few years, there has been a rapidly growing tendency to a bold, fearless—may I not say reckless?—progressiveness in the surgical branches of our profession, that would have appalled our predecessors. When we consider that some of these achievements are scarcely more than ante-mortem examinations, whose chief usefulness consists in demonstrating how long their owners are able to survive the loss of certain bodily organs, we may properly ask whether there is to be any limit to these exhibitions of surgical temerity.

I propose to discuss this question: In view of known facts, is it justifiable to extirpate the uterus for carcinomatous disease?

It is notorious that, in almost all instances in which surgical operations have been done for the removal of cancers, they have only been of temporary benefit, if beneficial at all. Nevertheless, so long as these procedures were comparatively free from danger to life; so long as they did no actual harm, they were doubtless proper in many cases, because they added for a time to the patient's comfort. They rarely did more than this. But when the operations themselves become so dangerous as to destroy 70 per cent. of lives within a few hours, or a few days; and when, of the few who escape the operation, 50 to 75 per cent. die from recurrence of the disease within a few months; and when, further, of those who yet remain all, or nearly all, die as soon as though no operation had been performed, we should halt to consider whether our calling, thus exercised, is beneficial or injurious.

The removal of the whole uterus is not a very novel operation. Andreas A. Cruce removed the organ, per vaginam, for scirrhus, in 1560; and similar operations were done by Wrisburg, and by Monteggia, at the end of the eighteenth century. Blundell operated in three cases in 1828, two of the patients dying, and one surviving a year, and finally dying from a recurrence of the disease.

In 1878, Prof. W. A. Freund reported a new method, under antiseptic precautions, whereby the uterus could be, as he thought, more safely removed than hitherto. In the early part of 1879, he had operated in ten cases, with the result of five deaths and five recoveries, and in September of that year, at the International Medical Congress, at Amsterdam, he reported four additional cases of his own. In one of these, the operation was unfinished; the other three were all fatal. Paggia (*Giornale Internazionale delle Scienze Med.*, fas. 3, 4, 1883) furnishes the latest table of operations by Freund's method. It includes 91 cases; 66 died; 25 recovered; mortality, 72.5 per cent. Yet, at the London Congress, Freund made the astounding statement, that the operation may be undertaken as a not very dangerous one in the early stages of carcinoma and sarcoma, in which it gives promise of a radical cure!

In consequence of the frightful mortality following the abdominal method, Czerny, Schrœder Martin, and others, have practiced the removal of the uterus by the vagina, and thus far with better results. A table compiled by Sänger (*Archiv. für Gynäkologie*, Berlin, 1883) includes 143 cases, of whom 72 per cent. recovered, and 28 per cent. died.

Extirpation of the uterus for cancer does not save, but destroys life. In order to show how much life has been sacrificed by it, I accept all the known fatal operations as the full number, although it is certain that there have been many more. They amount to 157 cases—97 by the abdominal, and 60 by the vaginal method. If we grant that in all these cases the disease affected the cervix, and that the average length

of life would be seventeen months, the calculation would show more than 222 years of life—over two centuries—sacrificed by the operation. If we consider that in many of the cases the disease affected the corpus uteri, as it surely did, in which the average duration of life is two and a half years, the aggregate amount of life destroyed would be even greater.

To summarize, I have endeavored to show that—

1. Diagnosis of uterine cancer cannot be made sufficiently early to ensure its complete removal by extirpation of the uterus.

2. When the diagnosis can be established, there is no reasonable hope for a radical cure; and other methods of treatment, far less dangerous than excision of the entire organ, are equally effectual in ameliorating suffering, retarding the progress of the disease, and prolonging life.

3. Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering—except in those whom it kills—nor gives reasonable promise of permanent cure in those who recover. Hence, it fails in all the essentials of a beneficial operative procedure, and should not be adopted in modern surgery.

After the reading of the paper, Dr. E. Andrews inquired if tumors of a cancerous nature occurring on the cervix were not usually of a malignant kind, instead of the milder variety, like epithelioma? And he further stated that Billroth claims that 33 per cent. are successful of removal of epithelial cancer from the lips and rectum. Dr. Jackson answered that the "schirrus" was the variety alluded to in the paper.

Dr. W. E. Clarke stated that in all the operations upon the cervix that he had performed for carcinoma, all had died within a year. In 1860 he removed the breast of a lady, and she apparently recovered—*i. e.*, she remained well for a period of nineteen years; but she died of cancer about three years ago. In all together, sixteen cases of amputation of the breast had been under his observation, and all died from a return of the disease.

Dr. R. H. Engert reported a case, of a cancerous growth on the anterior lip of the womb, that she had removed a few years since, and up to this time there was no recurrence of it.

Dr. E. C. Dudley agreed with the essayist in his paper, but thought cancer might and ought to be removed when situated in other parts of the body, and recited a case of a cancerous tumor of the pelvis that he operated upon four years ago The patient he saw but a day or two since, and she has no sign of a recurrence of the disease. The growth was proven to be cancerous from examinations of portions of it with the microscope. Some tumors occupy the middle ground bordering on the malignant, and yet they are benign. Another case he cited, where he operated three years ago. The tumor had ruptured five different times in the peritoneal cavity, bringing on peritonitis each time. In the operation antiseptic precautions were used, and he applied between thirty and forty ligatures to bleeding vessels. This was an ovarian cyst, containing a great deal of solid tissue, and was what might be called an endogenous cancer. Up to this time the patient is in perfect health, and it seems to be a permanent cure. But if the neighboring glands are involved as in the breast, axilla and under the clavicle, then it is a serious question about operating with a hope of cure. And the uterus certainly offers a very unpromising field for extirpation, as the fallopian tubes are a part of the uterus, and these are not removed in operating, and yet they are involved. He thought, however, if we diagnosticated a case to be sarcoma of the uterus, that we sould not say positively "No" to performing an operation.

Dr. G. C. Paoli had seen many operations for removal of cancer from the uterus. Some were in his native country. A few died on the operating table. One he remembered lived but six hours, some a few days, and one case survived the operation and lived six weeks. Regarding cancer of the breast he thought when removed in a few instances they proved to be fibrous; he saw two cases of this variety where the operator acknowledged them to be fibrous tumors and they both recovered, but he knew in true cancer, either of the breast or uterus, it is sure to return in time.

Dr. R. H. Engert thought if a cancer of the breast was decided to be cirrhus, she would advise it to be removed before the adjacent glands became involved.

Dr. A. H. Taggert spoke of a case operated on for removal of a cancerous breast twelve years ago and the patient was well and a resident of this city now.

Dr. D. T. Nelson hardly coincided with the sweeping statement of the writer of the paper, as he thought there is a border line between the severely malignant epithelioma and sarcoma. He would operate upon a sarcoma and thought it would possibly not return. In carcinoma he thought there was little hope of its *not* returning. He thinks it begins as a local disease at first, and if we could diagnosticate the case early we then might operate and the case sometimes be cured; at least he thought this might prove true of sarcoma. Spencer Wells, up to 1881, had never operated upon a carcinomatous uterus.

Wyna Williams states that we should remove as much of the cancerous cervix and fundus as we can, and then treat the wound with bromine and some recoveries resulted. The vaginal method is the safest and offers greater permanency of cure, but the broad ligaments are left and usually they too are affected. However, if we can diagnosticate the disease early I believe we are justified in removing it. He cited a case of the removal of the breast ten years ago, and the patient is yet living. Another case he knew of, a soldier, whose axillary glands were all involved. The surgeon who operated could not remove all the diseased glands for fear of opening the axillary artery. Hospital gangrene set in and the diseased tissues sloughed off, and the man recovered, so far that he was assigned to the invalid corps for two years and there performed duty.

Dr. Jackson closed the discussion by saying he feared from some of the remarks that had been made that he had failed to make himself properly under-

stood. He believed in the local origin of cancer, and believed in its removal, if removal be possible. He objected, however, to operations which destroy more than 50 per cent. of lives, and which experience has shown do not remove the disease in the cases of those who recover.

In operations for cancer, the object is not to remove a mammary gland, a pylorus, or a uterus, it is to remove a *disease!* And if this be not done the operation is a failure—it has not done what it aimed to do. And it is none the less a failure because the patient may survive without the ablated organ for a few weeks or a few months. He had only discussed the question as to the advisability of extirpation of the entire uterus for cancerous disease, an operation shown to be much more dangerous than the disease itself. He approved of the minor and safer methods —the curette, cautery, caustics, vaginal, or supra-vaginal amputation, etc., because they were capable of doing all that could be usefully done by total excision with comparatively little danger to life. In conclusion he would mention a fact that was rather humiliating to us as surgeons, namely, that the greatest success in the removal of the uterus had been obtained by midwives. There were on record no less than six cases in which that organ had been forcibly dragged from the pelvis, with but a single death.

Dr. J. Elliot Colburn then read a paper on the "Treatment of Trichiasis by Electrolysis," of which the following somewhat lengthy abstract is taken, as we believe the method of treatment described has not been extensively practiced by ophthalmologists.

One of the common causes of diseased cornea is misplaced or misdirected cilia: they may be irregular in growth, but one or two hairs sweeping the cornea, or the whole tarsal body may be covered by a dark and strong or pale and stunted growth of lashes, causing great irritation of the cornea, or loss of epithelial substance followed by ulceration, inveterate pannus or ulcers causing prolapsus of the iris, anterior synechia, and atrophy of the globe. This abnormal growth of the cilia may be spontaneous or caused by chronic inflammation of the conjunctiva of the margin of the lids, as in *tinæ tarsi* or traumatisms, as burns, wounds of the eye, etc. Trichiasis or districhiasis may be followed by or complicated with entropion in tracoma. The irregular growth of lashes will cause great irritation producing excessive lachrymation and photophobia, or sensation of foreign body in the eye. The diagnosis of districhiasis is easy, but in trichiasis the lashes may be so pale and minute as to escape detection. For this reason it is well in all superficial diseases of the cornea to examine the border of the lids with a three-inch lens and a strong light. The treatment of trichiasis consists in the permanent removal of the displaced lashes, and the treatment of such complications as may occur. The methods of treatment described in our text books are quite formidable and not altogether satisfactory, as they result in more or less deformity of the lid and destruction of tissues. The method which we have used in more than fifty cases, twenty-two of which I have been able to observe through periods of from six months to three and a half years, is the use of "electrolysis," as applied in the removal of hirsuties of the face. The instruments necessary are (as described by Drs. Fox, Hays and others) first, a galvanic battery of six or more cells. Second, a light needle-holder armed with a suitable needle. This is a very important instrument. The one I have found the most convenient is made by drawing the temper of a jeweler's brooch No. 6 and repointing on an emery stone. The patient being placed in a strong light, the surgeon fixes the lid in a Desmare's or Knapp's clamp. The patient holds the handle of a positive electrode in the right hand and places the moist sponge on the palm of the left. After the needle is introduced into the hair gland and allowed to remain for about ten seconds it may be withdrawn, the patient should remove the sponge from the left hand simultaneous to the withdrawal of the needle. The number of cells to be used should be decided by the surgeon's knowledge of the condition of his battery. I used from six to ten cells of zinc-carbon battery. When the hairs are very fine and obscure, the use of a three-inch lens will be found quite serviceable. After electrolysis, the cilia should be removed with epilation forceps. The only objection to the operation in my experience is that when there is a large number of cilia to be removed, the pain becomes somewhat tedious, though with a clamp I find the pain is not so great, and is only about fifteen per cent. as much. The irritation following the operation is slight, the lids will be swollen for a day or two. In one case, however, from which I removed but two or three hairs, the operation was followed by the growth of fifteen or twenty minute cilia which were promptly removed. I have noticed that chelazion and other cystic tumors of the lids would be very rapidly absorbed when treated from fifteen to twenty seconds with the same needle. My record shows more than fifty cases, and in all, so far as I know, the results were good. In twenty-two cases which have been under observation for more than six months since the last operation, there has been no return of the lashes removed. We have used this procedure at the State Eye and Ear Infirmary and at the Central Free Dispensary in simple trichiasis, entropium previously operated on and but partially successful, leaving a few misdirected hairs sweeping the cornea; also in cases of entropium which are unfit for operation. In too dense growth of cilia, that sometimes occur in scrofulous children, and interfering with sight—all diseases which interfere with the refracting media of the eye are of great moment to patient and physician, and among the most important are those affecting the transparency of the cornea and the regularity of its surface.

L. H. M.

DOMESTIC CORRESPONDENCE.

BOSTON, MASS., Oct. 30, 1883.

DEAR DR. DAVIS:

As you permit me, I send herewith for your journal—as I presume it is more *uniformly*, and perchance more *widely* spread than any medical journal

in the country—the document issued by the Central Committee of the League of the Italian Societies for Cremation. It is true that my translation of the original document has been, by mistake and without my knowledge, published in the *Boston Med. and Surg. Journal.* The editor, moreover, indulges his wit upon the whole matter as if cremation were a "pet scheme" of somebody, but as I have no such scheme in view and only a few suggestions to make, and as the Italian committee are honorable men and wish the paper to be *widely* circulated, I hope you will not decline its further publication. I shall use the translation as suggestive of matters connected with the great subject of public sanitary thought and work, viz., the question of the safe burial or cremation of bodies so that no evil may result to the living.

So far as I know, the questions connected with the relative sanitary values of interment and of cremation have never been scientifically settled. I doubt whether it would be possible for one man, or even one body of men, to satisfactorily determine these questions. I respectfully invite the attention of the whole profession, and especially the State Boards of Health, to the circular issued by the Italian League. Whether an individual approve of that document or not, or even if he have already settled the question as to his own action in the matter I would ask him to consider the following proposition:

It is true that intramural burials have been forbidden in some few cities, but that has been done, I think, rather because of the odor than of any *positive* proof of *evil* results to the living.

Cremation claims to destroy all germs and burn up everything noxious. One furnace claims to do so very completely. But the question of the sanitary value of the two methods is worthy of being still more thoroughly and carefully investigated.

Dr. J. F. A. Adams, of Pittsfield, in his admirable paper on Cremation and Burial (sixth annual report of Massachusetts State Board of Health, 1875) used the following language: "Further investigation we earnestly hope will be generally undertaken."

With great deference to the opinions and peculiar circumstances of the various boards of health in this country, I would venture to suggest to each the following plans or others similar to them:

1st. An individual, acquainted with sanitary matters and interested in the study of minute but important questions thereupon, should be employed to superintend the whole investigation.

This would divide itself into two parts, viz.: the real influence on health of the burial and of cremation.

(*a.*) The influence of grave-yards upon the health of individuals living or working in or near them.

(*b.*) The water in or near grave-yards and the soil over and around graves of old or recent date.

Throughout the country there must be many grave-yards appropriate for such investigation.

(*c.*) The air arising from such grave-yards should be tested chemically, microscopically and perhaps by experimentation on animals.

Cremation.—Of this method of disposing of the dead and of its influence an animal life we have a different field. If it be true that some furnaces have been constructed so that all impurities of the air which had been contaminated by the burning of a body are destroyed, it would seem that cremation would be more proper than burials. This point should be more thorougly tested, as above suggested, by all the appliances of modern science.

If it be true that intensely poisonous alkaloids coming from decomposing bodies, which, in combination with other matters, may become of a "frightfully poisonous character,"[1] it surely seems entirely appropriate for sanitarians to investigate the question of cremation as a preventive of that danger.

If grave-yards are *foci* of pestilential disease, as one of your correspondents recently has stated is the fact in one of our Southern States, the question of cremation instead of burial should be most widely mooted.

But where now can we look for a really scientific and well elaborated proof of the relative value of the two methods as sanitary measures for the future of our people?

In connection with this subject I would advise the perusal of the pamphlet entitled "Cremation." An argument to prove that cremation is preferable to interment of dead bodies, by Julius Le Moine, Pittsburg, Pa., 1881.

I cannot better finish these brief suggestions than by asking the same questions put by the writer of an excellent article entitled "On Cremation in the 19th Century."[2]

1st. Is ordinary burial ever dangerous?

2d. Does cremation remove the danger?

Yours, very truly,

HENRY I. BOWDITCH.

The document received from Italy is as follows:

SIR: I beg you to give the greatest publicity in your journals to the following note. G. PINE.

THE CREMATION OF THE REMAINS OF GENERAL GARIBALDI.

The Presidency of the Central Committee of the League of the Italian Societies for Cremation, has addressed the following notice to the Garibaldi family and to the President of the Council of Ministers (of Italy):

It is not very long ago since the whole of Italy was profoundly afflicted while deploring the loss of the great citizen, whose actions were a memorable example of the deepest devotion to country, to liberty, and to truth.

Notwithstanding this grief, there was universal applause at the news that the hero, by an act of his last will, had ordered that his remains should be burned as soon as possible after his death. Every one understood that this great act, inspired by the highest sentiments of our time, would exercise the greatest moral influence upon our people. Unfortunately, these manifestations of general approbation were quickly followed by a feeling of astonishment and deep regret, not less general, on hearing that the

family of the hero refused to carry out the solemn testamentary disposition of his own remains.

We will not discuss, nor will we even seek to know the feelings that had induced the relatives of the deceased thus to resist his last wish. We would simply remark, that if the laws of every civilized country provide that a due respect should be paid to every will which is well conceived and expressed, this duty becomes more imperative when the testator is a person worthy of the highest veneration as well for his great actions as for his noble aspirations.

It ought to be said that Garibaldi, by the will in question, meant to strengthen in the minds of our people a great philosophical principle, violently opposed as it may be by the enemies of all civil progress, viz., that fire is the surest purifier of the remains of those we mourn, inasmuch as it gives to the elements which compose it the primitive conditions of all future organism. This principle, which was revealed to a few ancient philosophers by a happy intuition, is plainly demonstrated at the present time by strong arguments resting upon facts, physical, chemical, and biological, of modern science.

The vote passed at the last Congress, at Modena, by the delegates from the Italian Societies for Cremation, is wise and praiseworthy in all its bearings. By this vote the Congress has expressed the desire that "on the occasion of the first anniversary of the death of the great captain his body should be burned at Caprera. At the same time the Congress requested all Societies for Cremation to agitate this question in their respective localities, so that all citizens may be led to ask of the government and of the family of Garibaldi exact fulfillment of the will of the General.

The Committee of the Italian League of the Societies for Cremation, therefore, to-day feels it an imperative duty to appeal in the most urgent and solemn manner to sentiments of humanity of the family of Garibaldi and the wisdom of the government for the fulfillment of the last will and testament of the General, and also of the wishes expressed by the first Congress of the Italian Societies for Cremation.

In acting thus, Italy will have accomplished a truly sacred and memorable act, while it is also in harmony with the fundamental principles of right, of morality, and of science.

Prof. G. CANTONI, Senator.
Dr. G. PINI, Secretary.

PHILADELPHIA LETTER.

THE CHICAGO BEEF WIRE SKEWER, AND THE DISCUSSION UPON IT IN THE JOURNALS AND PAPERS.

PHILADELPHIA, Nov. 9, 1883.

The health of our city continues very good, although there is, from certain indications, more diphtheria on hand than is pleasant. Owing to the mildness, however, of many cases, the results are unusually favorable, hence the Board of Health is able to state that the disease is not epidemic.

An attempt to raise a breeze on the subject of foreign bodies in the air-passages was lately inaugurated here, and as the original subject (that of food) bears upon, to some extent, the fame of Chicago, we subjoin an abstract of the paper attack which was read before the Philadelphia County Medical Society a short time ago, by Dr. W. R. D. Blackwood, Neurologist and Electrician to the Presbyterian Hospital, and Physician to St. Mary's Hospital, of this city:

The supply of good, wholesome meat to a large city, is a problem involving many points of great importance. Many cattle are slaughtered within a few hours after reaching the abattoirs, before the feverishness and excitement resulting from a long railroad journey have abated, and the meat, under the circumstances, is not nearly so good or suitable for food as it would be even in healthy and prime animals, were it killed after a due time of rest. For a short time past, beef slaughtered in Chicago, and brought here in refrigerator cars, has attracted the attention of those able to judge the article according to its merits, and for quality it is pronounced fully equal to any heretofore put on the market, and far ahead of the great bulk previously sold in the city, so far as a wholesome, sound, and moderate-priced beef is concerned. The animals are selected from approved droves, and well fed, watered, and housed for a definite and proper time before killing, and the product, therefore, is not only in its appearance perfect, but in the vital point of fitness for wholesome, nutritious, and palatable food it is unrivaled.

Some weeks ago, a sensational attack was made on this variety of beef, in the interest of a clique of butchers in this city, who, knowing the value of the Chicago article, were afraid of the effect on their business when it became better known to the public, and the silliest pretext, among others, advanced, was a supposed danger to consumers from the novel skewers employed to fasten the labels on the hind and fore-quarters, these being of barbed wire, such as I exhibit to you to-night. It was predicted that an epidemic of harpooned tongues, tonsils, and pharynges would ensue from swallowing unawares by consumers the numerous wire skewers concealed in the meat, and I am informed that, for a time, a serious falling off in sales actually resulted from fear on this point. You will readily see, that any one who would try to gulp down a morsel of meat large enough to hide this fastener, must at the same time be in a famishing condition, have the appetite of a tiger, and need lessons in table etiquette, to put it mildly.

The labels which are attached—one to each quarter only—are removed by the butcher before cutting up the meat, and could not, even if allowed to remain, fail to attract attention of both cook and eater. Mr. Bradley, of the Great Western Market, is a large dealer in this city of this excellent beef, and he has kindly supplied me with samples of the barbs. The claims which he makes for the particular beef under consideration are worthy of notice, as his experience in business for some years past is unequaled in this city, and the enormous quantity which he distributes to a large section of surrounding country fully justifies the high value he places upon it. I am glad to

[1] *Architect and Building News*, Sept. 29, 1883.

[2] Dr. W. Porter, of St. Louis, *New England Medical Journal*, Sept. 15, 1883.

confirm what he says, from personal experience in my family. The meat is simply delicious, and excels anything we have previously had from the best butchers of the city.

An attempt to revive distrust of this meat was made in a letter to the *Medical Times* from a recent graduate, who asserted that the hundreds of pieces into which the carcass was divided were armed with the deadly skewers by the *retail* dealers, through tacking on their private cards, etc.; but to "hedge" (as the gambling fraternity puts it), he consoled the public, who ran such frightful risks, with the assurance that *his* efforts with *one* certain firm had made the barbs "a thing of the past."

The author of the paper which had originated this outburst, however, is a practical, straightforward gentleman, neither aggressive nor retiring in matters of public interest; and to definitely settle the business, he has shown, in a pointed and caustic reply in the journal alluded to, that—

First. His paper originally appeared many weeks *after* the alleged swallowing of the barbs, and *after* the attack on Chicago beef made through the mediumship of a daily newspaper, and that *several* firms wholesaled the beef here, the person he warned having three large establishments, and that his information concerning the "clique" came directly from the irate butchers.

Second. That as only *four* skewers were sent with each entire steer from your city, the multiplication theory was visionary, even if the barbs were not removed before cutting up the carcass, as is actually done by the wholesale dealers.

Third. That the enterprising Chicago people cared nothing about the slow-going Quaker City notions, and that as the skewers perfectly fulfilled their errand, notwithstanding the pronunciamento of the young laryngologist and his one firm, the terrible barbs were *still in use* by all wholesale dealers here, samples with tags attached being sent to the editor from several of the dealers, which were taken from the quarters the morning his reply was written; and that, therefore, the security thrown around the community by the newspaper expose was merely fanciful, a sad result of "a tempest in a teapot."

A final consolation was added, to the effect that if the skewers *could* be swallowed (which no sensible man believes), then a new and unhoped for specialty in medicine had been discovered—that of EXPERT *in the extraction of Chicago beef barbed wire skewers!* An additional tribute was paid to the excellence of the beef, which has rapidly gained in the estimation of not only epicures, but the great mass of hungry householders, especially those of the working class, who know a good thing not only when they see it, but when it is *good* to eat.

TREATMENT OF TYPHOID FEVER.

HARMONY GROVE, GA., Nov. 8, 1883.

N. S. DAVIS, M.D.,

Dear Doctor:—I notice an article in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION on the treatment of typhoid fever, which was very interesting to me, as I had been making some investigations on the same line of treatment. I have been using an iodide mixture with iron and acid mixture; which I find to be the most successful of any treatment I have ever used. I find patients under this get well quicker and suffer less from dryness of the mucous membranes.

I believe this is the most rational treatment that ever has been used in the early part of the disease, as it acts on the glandular system and thereby prevents, as I believe, often the breaking down of the glands and the formation of the ulcers and other troubles accompanying them. I am in the habit of using the following prescription:

℞ Potassii iodidi ..... ℥i
Tinct. iodine ..... ℥i
Glycerine ..... ℥iv
Aquæ ..... ℥iv
M. Sig. Teaspoonful three times a day after meal.

℞ Tinct. iron ..... ℥ss
Dil. phosph. acid ..... ℥ss
M. Sig. Twenty drops before meal, or

℞ Hydrochlor acid ..... ℥i
Liq. pot. arsenic ..... ℥ss
Aquæ ..... ℥iv
M. Sig. Teaspoonful before meal.

A report of several cases has been made by me with this treatment in the Transactions of the Georgia Medical Association. My reason for the acid treatment with the iodide is to prevent the destructive metamorphosis of the tissue of the body and thereby prevent the loss of fat. I notice Dr. Smith recommends acid with his treatment.

Rspectfully,
L. G. HARDMAN.

IS CONSUMPTION AN INFECTIOUS DISEASE?

Early impressions and our personal surroundings have something to do with the formation of our opinions.

When a youth, my father, a clergyman, in one of his parochial visits took me into a small house where two sisters lay dying of consumption. When we left, my father said to me that probably the younger sister had taken the disease by sleeping with the older one.

My own mother developed the same dreadful disease, from which time her life was one of self-abnegation. She did not allow her children to take her breath; to cough, she invariably took herself to her room. So particular was she in the destruction of her sputa, that I never but once saw it, and that was when called to her bedside when she was supposed to be dying. I saw a splash of blood and pus that had fallen to the floor. She never kissed her children on the mouth after the disease developed. But I will not particularize further. She believed that the disease could be communicated.

These incidents show the traditions, and probably teaching, of the medical attendant fifty years ago. At that time in New England, when consumption took off one of a number of children, it was commonly remarked that the rest would go in the same way, and such was often the result. People then

generally lived in small houses; sleeping apartments were necessarily small and crowded. This proves nothing, of course, as we have no statistics of heredity at hand, but it accounts for impressions.

Within a few years I have seen the children of two families die out, four in each house, and in one a fifth, a son, is now tuberculous. I have wished they had better houses and more sleeping rooms; both are small frame structures, with an annex called a lean-to. This form of house crowds the children into a small attic for sleeping rooms. In one family both parents are living, with no discoverable taint. In the other the mother is well; the father has been long dead, I do not know of what. I could give several other instances of what seems to be similar effects from crowded sleeping.

The doctrine of infection is an old one, and it may not be amiss to very briefly recall opinions that doubtless have been familiar, but may be partly forgotten.

Sixty years ago "Thomas' Practice" (of England), edited by Prof. Hosack, of the University of New York, says: "Although phthisis is not at present regarded by us as infectious, yet Morgagni Von Swieten and Morton do so regard it, and all over Southern Europe and Asia Minor it is so regarded. In the Venetian states the law directs the clothing and even furniture of those who have died of consumption to be burnt. In Sicily consumptives were commonly deserted as though plague-stricken; bed and bedclothes were burnt, and apartments carefully disinfected."

"If the disease is communicable, it is by sleeping with the patient and inhaling the breath." He closes by advising to avoid close intimacy with consumptives.

The famous Gregory, who was contemporaneous with Thomas, cites the same authority and says: "It is a good maxim to err on the safe side. Precaution founded on the above facts would lead us to avoid sleeping with the sick as much for the purpose of avoiding the pernicious effect of bad air as from the danger of contracting consumption."

Dr. Rush relates the history of a contagious form of the disease which spread over a plantation (*Med. Mag.* vol. 1).

The Encyclopœdia of Prac. Med., says the subject is one that scarcely admits of being confirmed or confuted, giving similar advice in regard to hygienic measures.

Watson denies the contagiousness of consumption, but would not allow anyone to sleep with, or even in the same apartment, with the sick of the disease.

Williams on Consumption says: "I do not think it contagious like small-pox, scarlatina, etc., but both reason and experience teach that a noxious influence may pass from a patient in advanced consumption to a healthy person in close communication and may produce the same disease; and therefore always recommend such patients to sleep alone."

Bennet on Pulmonary Consumption expresses similar views.

Flint does not mention contagion, but the facts he gives of the spread of the disease in households are appalling.

Smith on Children says: "Recent discoveries afford ground for the opinion which some of our best authorities in pathology hold, as Waldenburg, etc., that minute particles exhaled or expectorated from the lungs may be the medium of infection."

Ruchle, after quoting the accurate and justly celebrated Morgagni, says (Vol. V., Ziemessen, p. 497), even at the present day it is commonly supposed that the disease may be communicated by the intimate relations existing between husband and wife; whether this can be fully proved we agree with Laennec and Andral that caution and cleanliness should be observed in the care of consumption.

Bartholow, Prac. Med., p. 357, says: "The frequent examples of apparent communication of the disease between husband and wife where a hereditary tendency had been proved to exist, have awakened strong suspicions of the possibility of communication."

Last year the medical department of the German ministry of war issued a circular, urging upon the medical officer with the army to give the utmost attention to beginning tuberculosis among recruits, and, as far as possible, not to enroll suspected individuals at all, or if enrolled to dismiss them from the service in the earliest stages of the disease. Hospital patients suffering from unquestionable tuberculous affections are to be isolated, and their sputa disinfected.

"In relation to this question, the microscopic examination of the sputa lately has become of the greatest importance. Therefore, first-rate microscopes recently were distributed among all the larger garrison hospitals in order to facilitate an early diagnosis."

Prof. Fraentzel (also an active army surgeon) congratulates the medical authorities of the War Department on this step, which, he thinks, will be so great a benefit to the army. He unhesitatingly adopts the germ theory of tuberculosis, and applies its logical deductions to clinical practice. Continued researches now comprising upwards of 500 cases served to confirm his former views about the diagnostic and prognostic value of the tubercle-bacilli found in the sputum. (*Med. News*, Aug. 25, 1883.)

Such is the general tenor of the tradition and the past two hundred years by which it will be seen that whatever theory of contagion may have been held, practically the advice has been, separation of the sick from the well in sleeping, and great care as to cleanliness; all of which does not prove tubercle to be infectious; but to this adding the vast number of successful inoculations of tubercle by Villemin, and many others for a period of nearly twenty years, we are prepared to believe that Koch may have discovered the fatal germ.

At the late meeting of the Wisconsin State Medical Society, I had the honor to introduce the resolution to which your correspondent of October 13 refers, and which, I learn, has been sharply criticised by Mr. Shrady, of the *Record*. It will be noticed that the resolution scarcely more than reaffirms the advice of the text-books. I do no defend the precise phraseology of the resolution, but its intention need not be misunderstood. After the discussion of

Dr. Senn's very able paper the resolution was adopted without a dissenting voice. The resolution advised the separation of the sick from the well, not only in our homes, but in public institutions. The latter were included from my having just been called to examine a man far gone with consumption in the State Prison. He was in a chilly corridor (the hospital was undergoing repairs), surrounded by well men, and it occurred to me that some of those men, who had no voice as to their associates, might go out with germs of the disease ready to be developed, a thing the law did not contemplate as a part of their punishment.

Cruel as the suggestion seems to the kind hearted Dr. Stair, I doubt if there is a parent who would not if instructed that there was possible danger, separate the sickly child from its fellows, and give it a cot in or near their own room. For I believe that in this as in other zymotic diseases, other things equal, youth are much more susceptible to infection than adults. The precautions proposed are simple, but I believe important.

I do not share your correspondent's fear that we as a society may suffer a serious humiliation when the theory of infection shall be disproved. When the multitude of pathologists abandon their microscopes and retreat we shall find ourselves in good company, and will console ourselves with the reflection that we have erred on the side of safety and humanity.

Mr. Shrady, of the *Record*, might possibly have chosen more courteous words when criticising the action of our State Society. Perhaps he has lectured the Medical Department of the German War Ministry for their precautions. I say "perhaps." I do not know. Two years since I thought the course pursued by the *Record* in relation to the Code unprofessional, and I ceased to subscribe for it; hence my ignorance.

MARKESAN, WIS. GEO. MANLY, M.D.

FOREIGN CORRESPONDENCE.

PARIS, October 26, 1883.

M. Camille Dareste, a distinguished teratologist, lately made a very interesting communication at the Academy of Sciences on the Production of Monstrosities in Man and in Animals.

He traces the origin of all congenital deformities to the embryonic state, and explains their mechanism by the arrest of development caused by the pressure of the amnios on the embryon, which produces results according to the age of the latter and the manner in which the pressure is effected. The arrests of development that may be attributed to this cause are, hemimelia, phocomelia, syndactelia, congenital deviations, congenital dislocations of the femur, essential paralysis of infancy. M. Dareste considers that all the anomalies of the limbs with the exception of polydactylia, however different in their aspect, are the result of three factors—arrest of development, deviation and soldering or adhesions, which are sometimes produced separately and sometimes together, which, in their turn, may be attributed to one sole cause, viz.: the pressure of the limbs against the amnios arrested in its own development. From these conclusions it would seem almost superfluous to endeavor to combat the theories which ascribe certain anomalies of the limbs to pathological causes, and particularly to diseases of the nervous system, and yet by a singular anomaly he admits their possibility, giving as his reason that these theories are too generally admitted to be set aside altogether. Clubfoot may be produced after birth by pathological causes, such as convulsions or paralysis, but M. Dareste contests that it could be produced by the same causes before birth. In fact, it was long suspected that these congenital deformities were caused by pressure during embryonic life, but the agent or mechanism of the pressure was not so well understood. After producing artificial monstrosities, M. Dareste arrived at the following conclusions:

1. That the amnios, arrested in its development, compresses those parts of the embryon on which it is applied.

2. That the pressure is exerted when the body of the embryon is as yet only constituted by homogeneous cells.

3. That this pressure when exerted on the limbs determines three sorts of effects, sometimes separately and sometimes together,—arrests of development, deviations and solderings or adhesions.

For the fourth time within the last few weeks the meetings of the Paris Academy of Medicine have been taken up with a discussion on tubercular phthisis. After M. Cornil, followed M.M. Bouchardat, Béchamp and Daremberg, and each had a theory of his own. All are agreed as to the contagious or parasitic nature of the disease, but they differ as regards the signification of the presence of the bacilli of tuberculosis discovered by Professor Koch, of Berlin, that is how the micro-organisms got there, whether they were generated in the body or whether they were introduced from without, or, in other words, whether the microbes of tuberculosis were the cause or consequence of the malady. M. Cornil confines his researches to the constitution of the tubercle and to the state of the tissues surrounding it, and he is aware that tuberculosis may be produced in a healthy subject by the inoculation of these bacilli.

M. Bouchardat protests against the theory of the production of tuberculosis by the introduction of a germ from without, and if it does enter the body, it does so very exceptionally. The eminent Professor of Hygiene describes the tubercle as commencing under the influence of a disturbance of the functions of the respiratory and circulatory systems, and which, in its turn, is produced by that condition known as physiological misery. Following in the track of M. Cornil's histological researches, M. Bouchardat explains the formation of tubercle by the stasis of the blood in the capillaries, and concludes with the remark, that if the inoculation of tuberculous matter is effective in producing phthisis, and if the latter becomes contagious, these conditions may be looked upon as accidents, which do not affect the general cause, to-wit, the physiological misery referred to above, by which the malady is engendered.

M. Béchamp expressed himself to the same effect. He said that the morbific cause existed in the organism, and that under the influence of this cause, the microzymata which constituted the deep layer of the pulmonary tissue are altered, and, by a series of modifications, become the generating foci of tubercles. These, in their turn, developing, unite to form cavities; or, in other words, it is the complete disorganization of the organ of respiration.

M. Daremberg contests M. Bouchardat's deductions drawn from M. Cornil's histological researches. For him, the bacilli are the direct and necessary factors of tubercle, and inoculation, moreover, demonstrates that they are also the generators of the disease, and that, consequently, the germ is introduced from without. But at the same time, M. Daremberg admits that for its development, it is necessary for the germ to have a favorable soil, without which, the bacillus of tuberculosis remains sterile. The morbific agent may be said to be in the body and out of the body; the patient manufactures his disease, but he does not do so alone; he must have the microbe. In other words, there can be no phthisis without the microbe, but there may be a predisposition only to the disease, and the practical conclusion arrived at is, that in our treatment of the disease, we should not confine ourselves to hunting after the microbe, but the general health of the patient must be improved by every possible means.

But, it may be asked, if it be sufficient to render the soil unfit for the development of the microbe, and if the extermination of the parasite is impossible, where would be the use of directing our attention to the microbe, which is unassailable if we do not direct our efforts to the amelioration of the general condition? In fine, for the clinician, the microbe may be considered as non-existent.

Dr. Depaul, Professor of Obstetrics and Physician to the Lying-in Hospital in Paris, died on the 22nd inst., at Morlaas, near Pau, his native place, where he had gone to recruit his health during the summer holidays. He was preparing to return to Paris, when he had an attack of pneumonia, which carried him off in three days, in the 73d year of his age. He began his medical studies in 1831, became a pupil of Paul Dubois, and took his degree in 1838. In 1841 he was appointed chef de clinique to the celebrated obstetrician whom he succeeded in 1862 to the professorial chair of Clinical Obstetrics, which appointment he held to the day of his death. M. Depaul was an able professor and a most expert accoucheur, and his systematic teachings will long be remembered by a host of his pupils who are scattered all over the world. In addition to these titles, Dr. Depaul was a member of the Paris Academy of Medicine, of which he was also President. He took part in the debates of the Academy on many important subjects, the most remarkable being the utility of vaccination; the origin of the vaccine virus; vaccination of syphilis; cow-pox, etc., on which subjects he was considered a high authority, from the vast experience he acquired as head of the vaccine department. At a memorable debate at the Academy, he also condemned the theories of M. Pasteur as applied to medicine, and stigmatized them as "audacious and extra-scientific." Dr. Depaul was created Chevalier of the Legion of Honor in 1855, Officer in 1868, and Commander in 1874, for his important services to science and to the State.

REVIEWS.

TRANSACTIONS OF THE NEW HAMPSHIRE MEDICAL SOCIETY.

At Its Ninety-Third Annual Session, held at Concord, June 19 and 20, 1883, 8vo-187 p. p.

The President's Address by Dr. N. H. Crosby takes for its topic "The Country Doctor," and indulges in humorous allusions to the past, drawing valuable applications at the same time from each incident. It contains also an interesting sketch of the founder of Thompsonianism in this country. Following this come articles entitled "Our Duty," by Dr. G. W. Hatch; "The great Work," by Dr. Geo. C. Blaisdell; "The Best Means to Prevent the Spread of Small-Pox," by Dr. T. J. W. Praz; "A Paper on Surgery," by Dr. F. A. Stillings, embracing remarks on indolent and varicose ulcers of the leg, carbuncle and its treatment; a new splint and the dry suture. The article by Dr. Irving A. Watson on "Water-Pollution Wells" reproduces the analysis of the waters of the Newport well, with its history and the result of the use of its waters by the neighboring farm-house; the history of the Rye Beach well, which has attracted so much attention, is also given. The Report on Practical Medicines, by Dr. Wm. T. Smith, who takes for his subject that of Colds. The address by Dr. D. W. Jones before the graduating class of Dartmouth Medical College. November 14, 1882, is also included in this volume. Dr. D. S. Adams reports progress in a case of abscess of the lungs, and Dr. P. A. Stackpole has an article on Venesection, its necessity and neglect, giving some eight cases where he had practiced venesection to advantage. A paper by Dr. L. G. Will relating to the Practice of Quackery in the State; Reports of District Societies, of delegates to the Dartmouth Medical College and to the Maine Medical Association; a necrological record of four members, and the list of members, comprehending 210 names, close the volume.

NEW BOOKS.

GERMANY.

Hasse, Dr. C., das Pessarum Occlusium u. dessen Applikation Supp. zu: Ueber facultative Stinlität. Third edition; 15 pp., Neu vividirt.

Henle, Prof. Dr. J. Grundriss der Anatomie d. Menschen. Braunschweig. Viesog & Sohn.

Lewandowski, Dr. Rud, die Elektro-Techink in der praktischen Heilkunde. Wien, Harteben.

Mittheilungen aus der chirurgischen Klintk zu Kiel. Hrsz. N. Prof. Dir. Dr. Frdr. Esmarch. Kiel. Sisins & Tischer.

——— Aus dem embryologischen Institute der. k. k. Universität in Wien, Von Prof. Dr. S. L. Schenk. Wien Branmüller:

Müller, Dr. Frdr. Wilh. Grundriss der Pathologie u. Therapie der venerischen Krankheiten, etc. Leipzig: Veit & Co.

Nowak, Prof. Dr. Jos. Lehrbuch der Hygiene. Wien, Toeplitz C. Deuticke.

Schatz, Prof. Dr, Frdr. Entwürfe. Hebammen-Ordnung f. das Grossherzogthum Mecklenburg-Schwerin. Rostock, Werthers, Verl.

Stricker, Prof. Dr. S. Vorlesungen üb. allgemeine u. experimentelle Pathologie. Wien Braumüller.

FRANCE.

Debierre (C.). Developpement de la vessie, de la prostate et du canal del'urethre. Paris.

Dujardin-Beaumetz. Dictionnaire de therapeutique, de Matiére Medicale, de pharmacologie, de toxicologie et des eaux Minerales. 7. 1. A—Chloroforme. Paris. (Il sera publié en 15 fasc, à 5 fr. Il paraitra 3 fasc. par année.)

Eyssantier (J.). Des procidences des membres dans les presentations du sommet et de la face. Montpellier Bochm et pls.

Felix (C. E.). Recherches sur l'excision des organes génitaux externes Chez l'homme. Lyon. Duc et Demaison.

Granel (M.) L'Ergot, la Roiulle et la Carie des céreàles. Paris lib Doin.

Guerin (G.). Essai chimique sur la taurine et extraction d' une ptomaine sulfurée de l'urine. Lyon, Waltener et Co.

Marangro (A.). De la résection du conde dans les cas d' ankylose et en particulier de la resection humérale du conde. Lyon: Delaroche et Co.

Masselon (J.). Mémoires d'ophthalmoscopie. Chorio-rétinite spécifique. Paris, libraine Doin.

Mazgnér (C.). Des formes diverses d'epidemics puerperales. Paris, lib. Doin.

Ribemont-Dessaignes (A.). De la delivrance par tractions et par apression. Paris lib. Doin.

True (H.). Ataxie locomotrice et lésions cardiaques, leurs relations pathogeniques. Lyon.

ENGLAND.

Abbreviated Prescriptions for Class Reading in the Westminster College of Chemistry and Pharmacy, 32mo., pp. 20, sewed; 1s., ——— & Co.

Foster (B). The Political Powerlessness of the Medical Profession. 8mo., pp. 19, bd. Churchill.

Guy's Hospital Reports. Volume 26, 7s., bd. Churchill.

Habershon (S. O.) The Harveian Oration, 1883. 2s., Churchill.

Hamsin (R.) On some recent advances on the Surgery of the Urinary Organs. 1s., Churchill.

Lankester (E.) The Cholera. What is it? and How to Prevent it. 6d., Routledge.

Manson (P.) The Filaria Sanguinis Hominis, and Certain New Forms of Parasitic Disease in India, China and Warm Countries. Illustrated. 10s. 6d., Lewis.

Martindale (W.) and Westcote (W. W.) The Extra Pharmacopœia of Unofficial Drugs and Chemicals and Pharmaceutical Preparations. 8vo., 6s., Lewis.

New Departure in Medical Electricity. 8vo., 2s. 6d., Morton & B.

Parkin (J.) The Antidotal Treatment of the Epidemic Cholera. Fourth edition, 5s., Bogue.

Reynolds (J. J.) Notes on Diseases of Women. Second edition, 12mo., pp. 110, 2s. 6d., Churchill.

Spencer (J.) Elementary Practical Chemistry and Laboratory Practice. Part I, 12mo., pp. 206., 1s. 6d., Boulton.

Welch (F. H.) Enteric Eever, as Illustrated by Army Data at Home and Abroad. 8mo., 5s. 6d., Lewis.

UNITED STATES.

Fothergill, J. Milner. The Physiological Factor in Diagnosis. N. Y.: W. Wood & Co. 8mo., 256 pp., cloth, $2.25.

Hudson, W. H. Sea-sickness. Its cause, nature and prevention without medicine or change in diet: A scientific and practical solution of the problem. Boston: S. E. Cassino & Co. 147 pp., 16mo., cloth, $1.25.

Hun, H. A Guide to American Medical Students in Europe. N. Y.: W. Wood & Co. 151 p., 12mo., cloth, $1.25.

Parkes, Edmund A. Manual of Practical Hygiene, in two vols. Vol. 1, N. Y.: W. Wood & Co. 8mo., 368 pp., illustrated. (Wood's Library of Standard Medical Authors) Cloth, subscription, $1.25.

Ringer, Sidney. Hand-book of Therapeutics. 10th edition. N. Y.: W. Wood & Co. 688 p., 8mo., cloth, $5.

Ross, Jas. A Treatise on Diseases of the Nervous System. Second edition. N. Y.: W. Wood & Co. Two vols., illustrated, 8mo., cloth, $15.

Witthaus, R. A. The Medical Student's Manual of Chemistry. N. Y.: W. Woods & Co. 8mo., cloth, $3.50.

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 2, 1883, TO NOVEMBER 9, 1883.

Price, Curtis E., Captain and Assistant Surgeon; assigned to duty at Fort Custer, M. T. (Par. 1, S. O. 187, Department of Dakota, October 25, 1883.)

Wolverton, William D., Major and Surgeon; granted leave of absence for one month. (Par 6, S. O. 201, Department of the East, October 24, 1883.)

Wilson, George F., First Lieutenant and Assistant Surgeon; assigned to temporary duty at Fort Townsend, W. (Par. 2, S. O. 149, Department of the Columbia, October 29, 1883.)

Owen, W. O., First Lieutenant and Assistant Surgeon; relieved from duty at Vancouver Barracks, W. T., and assigned to duty at Fort Stevens, Oregon. (Par. 2, S. O. 148, Department of the Columbia, October 26, 1883.)

Patzki, J. H., Captain and Assistant Surgeon; granted leave of absence for three months on surgeon's certificate of disability. (Par. 6, S, O. 254, A. G. O., November 6, 1883.)

Merrill, J. C., Captain and Assistant Surgeon; granted leave of absence for one month. (Par. 7, S. O. 201, Department of the East, October 24, 1883.)

Vickery, R. S., Major and Surgeon; assigned to duty at Fort Townsend, W. T. (Par. 3, S. O. 149, Department of the Columbia, October 29, 1883.)

Sternberg, George M., Major and Surgeon; leave of absence granted October 4, 1883, extended one month. (Par. 4, S. O. 255, A. G. O., November 7, 1883.)

Bache, Dallas, Major and Surgeon; par. 1, S. O. 238, A. G. O., October 18, 1883, assigning him to duty at Willet's Point, New York, revoked. (Par. 2, S. O. 252, A. G. O., November 3, 1883.)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING NOVEMBER 3, 1883.

The orders of Medical Inspector A. C. Gergas to the Naval Hospital, Mare Island, Cal., revoked, and to remain at Naval Hospital, Chelsea, Mass.

Medical Inspector Somerset Robinson to the Naval Hospital, Mare Island, Cal.

Surgeon F. M. Dearborne to appear before the Retiring Board Nov. 5.

Medical Director A. L. Gihon and Medical Inspector A. Hudson to represent the Navy at the meeting of the American Public Health Association at Detroit, Mich., Nov. 13.

Assistant Surgeon J. M. Edgar, from the Receiving Ship St. Louis, at League Island, Pa., to the Receiving Ship Wabash, at Boston, Mass. P. A. Surgeon A. A. Austin to the Receiving Ship St. Louis, at League Island, Pa.

There were no changes during the week ending Nov. 10.

A NEW prize, to be called the Bufalini prize, is annnounced for international competition, having been established in fulfillment of the wishes expressed by a late Minister of Public Instruction, Italy, Signor Bufalini. The first award is to be made at the end of 1884, and competing essays are required to be sent in to the Secretary of the Medical Faculty of Florence, before October 1, of next year. The subject selected is "The Application of the Experimental Methods to Science."—*Medical Press.*

NEW MEDICAL JOURNAL.—The first number of the Edinburgh *Clinical and Pathological Journal* was issued October 13. It is under the joint editorship of Dr. Graham Brown (medicine), Dr. Cathcart (surgery), and Dr. Berry Hart (midwifery).

THE SURGICAL PANTAGRAPH.—The latest use to which the graphic method has been put is to obtain an exact representation of the shape and size of a body in the depth of a cavity which can only be reached by the finger, by means of an apparatus attached to the finger, with a planchette at the back of the hand communicating with a pencil, which will trace out on a piece of paper all the movements of the finger. The instrument which is to perform this by no means easy feat, is the fertile invention of M.M. Mallez and Napoli.—*Times and Gazette.*

LONGEVITY OF SAVANS.—The Dean of the Paris Academy of Sciences, M. Chevreul, has recently entered upon his 98th year. The following names of those who have served as Dean foot up, with their respective ages at the present time, to a remarkable degree of longevity, viz.: M. Barthélemy Saint Hilaire, 78 years; M. Charles Lucas, 80 years; M. Boussingault, 81 years; M. Dumont, 82 years; M. Dumas, 83 years; M. Milne-Edwards, 83 years; and M. Mignet, 87 years.

NECROLOGY.

CUMMINGS, SILAS, M.D., a native of and for fifty-five years an actively employed physician in the town of Fitzwilliam, N. H. Born in 1803; died at his residence June 30, 1882. Educated at the common schools. Read medicine with the "family physician. He then graduated at Dartmouth Medical College 1827. Dr. Cummings was the trusted physician of a large circle of personal friends in his own and adjoining towns. Was a member of, and an ex-president of, the New Hampshire Medical Society, from which Society he was a delegate to and became a member of the American Medical Association in 1849, and attended the meetings of 1855, '60 and '65. He was a friend alike to the rich and the poor, carrying the same conscientious cure to one as the other.

G. P. CONN, MD.

STEVENSON, JAMES S., M.D., was born at Covington, Ky., and came to Baltimore forty years ago where he died Aug. 3, 1882. The exact cause of his death is unknown to me, but it is supposed that he died from inflammation of the bladder. Up to within a few months of his death Dr. S. had been a hard student and an earnest worker in the profession. He devoted much of his time to surgery, and performed many difficult operations. Dr. Stevenson was a well cultured gentleman and was quite up in matters outside of his profession; he was beloved by all that knew him, and but for his retiring manners could have made himself much more prominent in the community in which he lived. He attended the meeting of the American Medical Association which met at Cincinnati in 1850-'51, and always took a great interest in its welfare.

Respectfully,

WILLIAM LEE, of Maryland.

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. I. CHICAGO, NOVEMBER 24, 1883. NO. 20.

ORIGINAL ARTICLES.

GLYCOSURIA—ITS COMPLICATIONS AND THERAPEUTICS.

BY OSCAR C. DE WOLF, A. M., M. D., PROFESSOR OF STATE MEDICINE, GHICAGO MEDICAL COLLEGE. COMMISSIONER OF HEALTH, CHICAGO.

[Read before the Chicago Medical Society, November 19, 1883.]

In a former paper[1] I reviewed the pathology of glycosuria, designing in this to present a series of cases, but the literature of the complications of the disease has proven so voluminous, that I defer the grouping and detail of such cases as have come within my observation to a future time, confining myself now to an attempt to deduce a few rational principles of therapeusis from the mass of observations now before the profession. Glycosuria is a secondary complication of many diseases; the treatment of the primary affection cures the glycosuria without affecting it other than indirectly. The secondary nature of the glycosuria is ignored, and it is regarded as amenable to treatment which could affect it, if at all, only indirectly. Glycosuria appears and disappears under certain conditions with equal facility, whether treatment be followed or neglected. Such elements of error must be eliminated before the therapeutical relations of glycosuria can be determined. It, therefore, becomes necessary at the outset to pass in review the affections of which glycosuria is a secondary complication and the conditions which give rise to it, and, as a further ground for investigation, to discuss the secondary complications of the disease. The affections of which glycosuria forms a secondary complication are first and foremost the neuroses; hysteria is complicated by glycosuria of transitory, or relatively prolonged, duration, which may eventuate in seeming glycosuric coma, but which disappears with the disappearance of the most marked hysterical symptoms, as witness the cases reported by Le Grand Saulle,[1] Seegen,[2] Rognosi,[3] Wagner,[4] Shingleton Smith,[5] Waterman,[6] Marchal (de Calvi),[7] and Kiernan.[8] Braun,[9] Eulenburg,[10] Marchal (de Calvi),[11] and Rosenstein[12] have observed glycosuria during sciatica, which disappeared on recovery. Delpech[13] has had under observation a paretic dement, in whom glycosuria existed from the onset of the psychosis. During the apoplectiform and epileptiform attacks of that psychosis and after the gastric crises of locomotor ataxia, glycosuria has been noted. It has also been observed after epileptic convulsions, especially after the *status epilipticus*. Bumm[15] finds that delirium tremens is often attended by more or less glycosuria.

Sciatic nerve-stretching and section produces glycosuria, as witness the cases reported by Wiet,[1] Marcus[2] and Schiff.[3] Tetanus is at times complicated by glycosuria, as in the case reported by Vogel.[4] Chorea major also at times co-exists with glycosuria, as in the case coming under the observation of Von Franque.[5] It succeeds the choreic movements and continues till recovery. Cases reported by Fischer,[6] Goolden,[7] Fritz,[8] Itzigsohn,[9] Dompeling,[10] Griesinger,[11] Plagge,[12] Kaemnitz,[13] Mösler,[14] and Ollivier,[15] show that cerebral tumors, skull injuries, and apoplexy, bear a very similar relation to glycosuria.

Snell,[16] Madigan,[17] Cotard,[18] de los Santos,[19] and Kiernan,[20] report cases in which glycosuria and the psychoses alternate; during the mental disease glycosuria is not present and the appearance of glycosuria is an indication of recovery; its disappearance is the precursor of an attack of insanity.

Glycosuria is among the symptoms produced by certain drugs; amyl nitrite,[21] ammonia,[22] carbolic acid,[23] carbon chloride,[24] carbonic oxide,[25] chloral hy-

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1 Boston Medical and Surgical Journal, Vol. CVI.

1 Les Hysteriques
2 Diabetes Mellitus auf zahlreichen beobachtungen.
3 Lancet, 1852
4 Ibid, 1853.
5 British Medical Journal, April 7, 1883.
6 Medical Record, Vol. 23.
7 Récherches sur les accidents diabetiques.
8 Gaillard's Medical Journal, Sept. 1883.
9 Lehrbuch der Balneotherapie.
10 Cyclopædie.
11 Op. cit.
12 Virchow's Archiv Band. XII.
13 Archives de Neurologie tome IV.
15 Berlin Klein Woch., No. 25, 1883.

1 Gazette des Hopitaux, May 24. 1881.
2 Ibid.
3 Untersuchungen über Zuckerbildungen in der leber.
4 Deutsches Archiv für Klinische Medicine, Band X.
5 Jahrbücher für Kinderheilkunde, 1867.
6 Archives générales de Médecine, Tome XX.
7 Lancet, March, 1862.
8 Gazette Hebdomadaire. Tome VI.
9 Wagner, General Pathology.
10 Neder. Arch voor Geneeskunde, Band VI.
11 Archiv. der Hielkunde, Band XIII.
12 Wagner, General Pathology.
13 Ibid.
14 Ibid.
15 Gazette Hebdomadaire, No. 11, 1875.
16 Psychiatrisches Centralblatt, Band XXXVIII.
17 Journal Nervous and Mental Disease, April, 1883.
18 Annales Medico-Psychologiques, January, 1880.
19 Lectures on Insanity.
20 Archives Génerales de Médicine, March, 1877.
21 Harley, Lancet, 1857.
22 Hoffman, Archiv. für Anat. und Phys, 1872.
23 Own observation.
24 Eulenberg, Op. cit.
25 Revue Scientifique, 1874.

drate,[26] codeine,[27] corrosive sublimate,[28] curare,[29] eucalyptol,[30] hydrogen peroxide,[31] iodoform,[32] morphine,[33] nitro-benzol,[34] opium,[35] phosphoric acid,[36] quinine,[37] resorcin,[32] salicylic acid,[32] soda valerianate,[38] turpentine[38] and uranium nitrate.[39]

It would appear that febrile conditions were capable of producing glycosuria sometimes of prolonged duration; thus Zinn[1] finds that in a large percentage of cases of scarlatina in nervous children, glycosuria results; Senator[2] states that intermittent fever is sometimes complicated by temporary glycosuria; Madigan[3] has observed that vaccination, followed by marked rise in temperature in the insane, results in a temporary glycosuria; Gäthgen has had similar experience with other febrile states. Conditions in which the respiration is involved, as in phthisis and cardiac diseases, are, especially if there be well-marked dyspnœa, often accompanied by glycosuria. Abeles[4] has reported many such cases. In cholera glycosuria has been observed as a secondary complication by Huppert,[5] Heintz,[6] Wyss,[7] Buhl,[8] and Gubler.[9]

The complication of pregnancy by glycosuria was denied by Wiederhold,[1] Leconte,[2] and Griesinger.[3]

Blot,[4] Heller,[5] C. G. Lehmann,[6] Kinsten,[7] Brücke,[1] Waterman,[8] Henney,[1] Iwanoff,[9] de Sinety,[10] Ables,[11] Cazeaux,[12] and Hempel[13] have conclusively proven that this was an error. Bennewitz[14] reports the case of a woman who was glycosuric at each successive pregnancy. J. Matthews Duncan[15] concludes that glycosuria may come on during pregnancy and be present during the period of pregnancy only, or it may recur sometime after, or it may come on immediately after pregnancy. Bouchardt,[16] Oppolzer,[17] and Gibb[18] have reported cases in which glycosuria coming on after pregnancy remained for a long period and sometimes permanently; in the first case it disappears suddenly. Mammary abcess and ablation are sometimes followed by glycosuria. Prout,[1] Garrod,[2] Snell,[3] Bence-Jones,[4] Stosch,[5] Rayer,[6] Contour,[7] Schmitz,[8] Claude Bernard,[9] and Charcott[10] have demonstrated that gout alternates sometimes with glycosuria, and that it precedes very often a glycosuria, which thereafter co-exists with it. A. Jacobi[11] has recently reported a case of this latter type. The vaso-motor changes concomitant on senility are, as might be expected, *a priori*, attended by glycosuria generally of an intermittent type and often destitute of well-marked symptoms; concerning it Charcot[10] says "the urine is, as a rule, only slightly increased in amount and the thirst may not be at all marked." It will be obvious from what has been already said that in conditions in which marked cerebral circulatory changes occur, whether from the administration of drugs, from pyrexia, or secondary neuroses, glycosuria may occur; that it may be of temporary duration, may present mild constitutional symptoms and disappear without special treatment. The fact that senility gives rise to an intermittent glycosuria shows the error involved in the report of mild cases of glycosuria, occurring after sixty, as being cured by treatment. The existence of a hysterical type of glycosuria explains the frequent reports of cures of "mild cases of glycosuria in women." The existence of a mild type of glycosuria related to gout seems to lend probability to the view of Bence-Jones[1] that gout and glycosuria were diseases of sub-oxidation. While this is not impossible, the origin of the sub-oxidation still requires explanation and Dyce-Duckworth[2] has shown that gout itself is a trophoneurosis. From the facts cited it is evident: First. That the apparent improvement of glycosuria under treatment in a paretic dement, an epileptic, hysteric, a pregnant woman, gouty individual, or an old person is not of value as evidence of the influence of such treatment on glycosuria. Second. That any of these conditions may give rise to a permanent glycosuria of a mild type. The subject can be best discussed in its other relations after an examination of the secondary complications of glycosuria.

Marchal[3] (de Calvi) has very aptly said that the neurosis occurring during glycosuria have been very frequently regarded as of primary origin, when in reality they were consecutive. Ogle[4] expresses the same opinion. Bouchardat[5] says that neuroses appear to be very frequent among glycosurics who are great meat eaters and take more alcohol than is good for them. Bouchard[6] has not found these two articles of

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26 Kane, Drugs that Enslave.
27 Own observation.
28 Rosenbach.
29 Own observation.
30 Own observation.
31 Bericht der Chemisch. Gesell. 1883.
32 Own observation.
33 Kone, Op. cit. Levenstien. Morphiumsucht.
34 Ewald.
35 Pavy, Op. cit.
36 Kulz, Deutsch. Arch. f. Klin. Med, Band XII.
37 Almen.
38 Leconte.

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2 Hoppe-Syeler Med. Chem. Unters. III.
3 Chicago Medical Review, July 15, 1882.
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6 Senator, Op. cit.
7 Journal de Therapeutique, 1878.
8 Archives Générales de Médecine, August, 1857.
9 Journal de Therapeutique, 1878.

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1 Zeimssen's Cyclopædia
2 Journal de Therapeutique, 1878.
3 Op cit.
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5 Comptes rendus XLIII.
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7 Monatschrift f. Geburtsk, June, 1857.
8 Op. cit.
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10 Gazette Médicale, No. 45, 1873.
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13 Hufland's Journal, Band LXI.
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17 Duncan, Op. cit.
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2 On Gout.
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4 Med. Chir, Trans. vol. XXXVI.
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7 Thése de Paris, 1844.
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2 British Medical Journal, March, 1881.
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4 St. George's Medical Reports, Vol. 1.
5 Op. cit.
6 Maladies par la Relentissement de la Nutrition.

diet to be the exciting causes of glycosuric neuroses. Bernard and Féré[7] are of opinion that the neurotic complications of glycosuria are an expression of the constitutional condition on which glycosuria depends, and are not due to hyperglycæmia. Glycosuria frequently vanishes from the urine just prior to cerebral complications. They divide the neurotic complications of glycosuria into lesions of motility, of general and special sensibility, of the intelligence, and of trophic functions. Among the most marked motor affections may be cited the fatigue, lassitude, deprivation of muscular energy, whose clinical value Marchal[1] (de Calvi) was the first to point out. This affection does not depend on muscular weakness pure and simple; it may be so well marked as to lead to suspicion of a medulla affection. One such case has been described by Laségue[2]. This condition is not always well marked; it may suddenly disappear, to return as suddenly; it may occur first in consequence of a slight traumatism. Paralyses, properly so-called, are rare in glycosuria; they are often localized, partial, and incomplete. They may appear subsequent to an attack of apoplexy, as in a case reported by Laségue[2]. A young man was attacked by apoplexy with complete coma, followed by hemiplegia, recovery from which was rapid; the same phenomena recurred the next year. Aitken[3], Copland[4], and Watson[5] have reported similar cases. Sometimes a sudden loss of consciousness occurs, which is rapidly recovered from without any resulting paralytic phenomena. Vertigo sometimes occurs alone, and sometimes precedes paralysis. Paralytic symptoms occur, as a rule, without vertigo or loss of consciousness. Hemiplegia may be attended by bizarre phenomena. One of Charcot's[6] patients was one night attacked by left hemiplegia; at the same time monoplegia of the right eyelid made its appearance (monoplegia is so frequent an accompaniment of glycosuria, that Bernard[7] and Féré claim that the urine should be examined in every case of this kind). Ogle[8] reports a case in which paralysis of the right arm and face, hesitancy in speech, ptosis, dilatation and strabismus followed upon the disappearance of glycosuria. Kinnicutt[9] and Gregori[10] report similar cases, and such cases are far from exceptional. The monoplegias may be only paretic in character, and extremely transitory. The speech troubles are, as a rule, due to buccal dryness, but true aphasia does occur. Aphonia from laryngeal paralysis is far from exceptional. Imperfect muscular coördination in the dark, attended by formication in the extremities, is sometimes noticed, and may, as in a case reported by Stockvis[1], lead to a suspicion of locomotor ataxia. A case of cervical paraplegia, followed by respiratory difficulty, in which death occurred, has been observed by Lecadre[2].

Kiwatowski[3] has reported a case of paralysis of the patheticus; Féré[4], a case of paresis of the right externus. Galezouski[5] says that paralysis of the ocular muscles occur during the incubation of glycosuria, and that the muscles innervated by the sixth pair are most affected; the paralysis is sometimes only monocular. It usually occurs early, is not accompanied with pain, and is marked by double vision, in which one object is colored. Paralysis of the third pair is marked by crossed diplopia. Patheticus paralysis, which is rare, gives rise to a not very decided homonymous diplopia.

Cramps and convulsions also occur. Cramps often attack the lower extremities especially at night, in which case it is an important element in the production of insomnia; the first indication of cerebral circulatory development, and it may be the precursor of serious complications. Convulsions may be associated with coma or may accompany paralytic phenomena; they present at times the mono-plegic epileptic character and alternate with transitory paralysis of the same side. Vertigo may assume and epileptoid character.

It is of interest from the standpoint of pathogeny to note that paralysis may appear before sugar is detectable in the urine, at the time of its disappearance, or some time thereafter.

These motor phenomena are, in the main, due to rapid vaso-motor changes of central origin. Such an extended character and so great a number of motor phenomena point very decidedly to the inference that in all types of glycosuria, vaso-motor perturbations of decided character and central orgin, occur. It is also evident that coincident with or precedent to the appearance of glycosuria, the vaso-motor centers are affected.

Complete anæsthesia is rare; anæsthetic patches on the thigh have been observed by Laséque.[1] Dionis[2] has observed a case in which both ears were anæsthetic to heat and were persistently cold; a year later they become gangrenous. Neumann[3] has been able to pull hair out of one of his patients without its being noticed. Patients often complain of pressure, coldness or numbness of the extremities, particularly of the lower extremities. Hyperæsthesia occurs in patches and may be present without any co-existing symptoms other than saccharine urine. Glycosurics are very sensitive to external heat and frequently complain of illy defined pains attended by lassitude in the lumbar and dorsal regions, sometime in the cervical; these last were met with in one half of Leudet's[1] cases, the pain resembles the so-called "fox bite" made by boys as a practical joke. Coitus often induces it, and with it cervical stiffness co-exists very frequently. Headache comparable to the weight of a leaden cap is far from infrequent. These pains may take on a neuralgic type. Drasche,[2] like

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[7] Archives de Neurologie tome IV.

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[1] Op. cit.
[2] *Journal de Med. et de Chir.*, 1882.
[3] Science and Practice of Medicine
[4] Dictionary of Medicine.
[5] Lectures on Physic.
[6] Op. cit.
[7] Op. cit.
[8] Op. cit.
[9] *Medical Record*, Aug. 25, 1883.
[10] Thése de Paris, 1883.

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[1] Archives de Neurologie tome IV.
[2] Cited by Marchal (de Valvi).
[3] Thése de Paris, 1881.
[4] Op. Cit.
[5] Journal de Therapeutique, Feb., 1883.

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[1] Op. Cit.
[2] Moniteur des Höpitaux, 1857.
[3] Clinique Med. p. 315.

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[1] Bernarn and Féré. Op. Cit.
[2] Wiener Med. Woch. Jan., 1882.

Worms[3] and Buzzard,[4] finds glycosuric neuralgiæ have a tendency to symmetrical development and an agonizing character. Schmitz[5] found that while crural neuralgiæ were not uncommon, sciatic and lumbar were infrequent; he had observed a few cases of cervico-occipital neuralgia and of mastodynia. Drasche[2] had a case of symmetrical intercostal neuralgia. When the right side only is affected this is coincident with painful sensibility of the liver, which Léchorche[6] believes depends upon hepatic congestion. Pruritus vulvæ is very frequent among female glycosurics and Leroux[1] has found general pruritus present in a large number of cases. Sexual impotence occurs and is accepted with apathy. In cases where this occurs early there may be frequently found accompanying and preceding it, according to Verneuil,[2] induration of the corpus cavernosa.

Asthma, other respiratory neuroses and exophthalmic goitre may make their appearance early in glycosuria and may be as transitory as other glycosuric neuroses. Deafness is relatively frequent among glycosurics; it is sometimes slight and fleeting, some times complete. In Prout's[3] opinion it, as a rule, is of purely neurotic origin. Cases like that of Renaudin,[4] however, exist, in which deafness results from otitis media. Trousseau[5] reports a case in which otalgia preceded hemiplegia and fatal coma.

Jordao,[6] Leudet[7] and Lécorché[8] have observed cases in which smell and taste were abolished or perverted.

It is difficult to determine whether glycosuric keratitis, iritis, or irido-choroiditis are due to hyperglycæmia, *per se*, or to concomitant neurotic lesions. Leudet's[1] case would seem to indicate that both these factors played a part at times. Panas[2] insists that a keratitis of unknown origin and rapid course calls for urinalysis, which is also the opinion of C. J. Lundy[3] and Coundourous.[4] Probably eight-twelfths of the glycosurics manifest eye symptoms. Marchal[5] (de Calvi) distinguishes glycosuric amblyopia, properly so called, from simple visual perversion. Alcon[6] has noticed in an emmetropic 61-year-old woman, of healthy antecedents, in whom glycosuria developed after a skull injury, that simultaneously sight became impaired and hypermetropia was evident; vision was reduced one-half. The sugar gradually disappeared from the urine, and, *pari passu*, the hypermetropia. Five months after the receipt of the injury the patient was again emmetropic, and sugar was no longer detectable in the urine. Dionis[7] had a patient affected with glycosuria who saw all objects to the left of their real position and turned half upside down. All varieties of accommodative asthenopia are observed; these vary greatly, and are more marked with hypermetropes than with emmetropes; more marked with these last than with myopes. Glycosuric amblyopia is either slight or grave, and is often the only complication; objects are seen in a yellowish background. Glycosuric presbyopia early occurs and affects the two eyes unequally; it varies at different times. Panas[1] finds that the latter condition results from accommodation-paresis, and the patient seems to be amblyopic; it is found, however, on examination of the ocular fundus, that, at most, a slight papillary congestion exists. All these varieties of accommodative asthenopia are, in Panas'[2] opinion, only an expression of the constitutional condition. With these visual troubles, vertigo—a secondary consequence of them—may coexist. Cataract, as has been pointed out by Galezowski[2] and Lundy,[3] may coexist with, and mask the other ocular phenomena. The onset of amblyopia is sometimes sudden, often insidious; sometimes dyschromatopsia accompanies it. Hemiopia has been observed by Bouchardat,[1] v. Gräfe[2] and Bellouard.[3] Concerning it, Galezowski[4] says: "Some glycosurics find their visual troubles gradually develop until, for some reason, they cannot see as clearly. In other cases the patient, after a violent headache, sees objects in a broken manner, and is at the same time diplopic. Others, after hemicrania, find that vision has suddenly diminished in one eye. In other cases, after an attack of vertigo approximating apoplexy, the patient, on recovery, finds himself blind, but this total blindness is soon succeeded by hemiopia." Hemiopia, in Galezowski's[4] opinion, is very frequently associated with glycosuria.

In certain cases retinitis is observed which does not differ greatly from albuminuric retinitis. The cases observed by Laber,[5] Panas,[6] Mialhe,[7] Noyes,[8] Haltenhof,[9] Jäger[10] and Desmarres[11] show that glycosuria alone can produce such retinitis. Galezowski[1] says that glycosuric retinitis is characterized by hæmorrhages; at times few, at others numerous, sometimes limited, and sometimes markedly extensive. Their multiplicity shows how extensively the vessels are affected and how frequent the rupture of the walls. By the side of these hæmorrhages are to be noticed yellow patches of exudation, sometimes pretty numerous; these shining patches are produced by extravasation of fibrin into the retinal tissue, and, as a rule, exist from the onset. Glyco-

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3 Bull. de l'Acad. de Med. T. IX. S. 20.
4 Lancet Vol. 1, 1882.
5 Op. Cit.
6 Gazette Hebd. 1881.

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1 Thése de Paris, 1881.
2 Revue Med. Dec. 10, 1882.
3 Op. Cit.
4 Annal des. Mal. de l' orille et du Larynx, Jan., 1882.
5 Clinical Medicine.
6 Senator Op. Cit.
7 Op. Cit.
8 Op. Cit.

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1 Op. Cit.
2 Annal d' Oculitique, 1881.
3 Mich. Med. News, June, 1880.
4 Thése de Paris, 1883.
5 Op. Cit.
6 El Giglo Medico, January, 1880.
7 Op. Cit.

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1 Op. Cit.
2 Op Cit.
3 Op. Cit.

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1 Op. Cit.
2 Gräfe's Archiv. Band IV.
3 Thése de Paris, 1880.
4 Op. Cit.
5 Archiv. f. Ophthalm, 1875.
6 Op. Cit.
7 Archiv. f. Ophthalm., 1873.
8 New York Medical Journal, 1873.
9 Monatsb. f. Augenheilk, 1873.
10 Senator Op. Cit.
11 Ibid.

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1 Op Cit.

suric retinitis frequently results in optic nerve atrophy. The functional troubles vary from simple amblyopia to complete blindness. Hæmorrhagic retinitis may produce complications on the side of the choroid, iris, and crystalline lens. Weinberg[2] and Dufresne[3] have reported cases which confirm Galezowski's[1] views. Desmarres[4] regards hæmorrhagic retinitis as a precursor of oncoming cerebral hæmorrhage. Heyl[5] describes a lipæmia of the retina. Galezowski[1] claims that cataract, which occurs in about ten per cent. of the glycosurics, is frequently the result of retinitis; as a rule both eyes are affected, but the morbid process does not advance in each with equal rapidity. Seegen[1] states that it is due to an impairment of the mitrition of the crystalline lens, and increases with increased excretion of sugar; but this, according to Griesinger,[2] is not an invariable rule; cataract occurs in advanced cases, as a rule, but is sometimes the first symptom of the disease to be noticed. Unilateral sweating has been observed by Koch,[3] Külz[4] and Nitzelnadel.[5] The mental condition of glycosurics is often affected. The patient becomes depressed or apathetic; an apathy, interrupted by frightful dreams, or complete as in the cases described by Le Grand du Saulle;[6] Durand-Fardel[7] is of opinion that this apathy is due to the general enfeeblement. Cotard,[8] Madigan,[9] de los Santos,[10] Zimmir,[11] Fleury,[12] Schmitz,[13] Marchal[14] (de Calvi), Seegen,[1] Snell[15] and Kiernan[1] have reported cases of glycosuric insanity marked by depression. Bernard[2] and Féré state that coincident with the motor symptoms the mental enfeeblement of paretic dementia makes its appearance.

Trophoneuroses are not wanting in glycosuria; some patients present affections nearly resembling those observed in spinal cord diseases. Clement[3] has observed perforating ulcer of the foot in no way distinguishable from that resulting from spinal affections or from paretic dementia. Leudet[4] and Cantani[5] have observed localized skin atrophies similar to those due to lesions of the anterior cornua. Quermonné[6] and Féré have observed dermic vegetations of like character. Magitot[7] has observed changes in the lower jaw and aveolar border of both jaws, which, he claims, are pathognomonic of the disease. Féré[6] and Dickinson[8] have observed muscular atrophies undistinguishable from those of neurotic origin.

The subject of coma was partially discussed in the preceding paper, but since that has appeared some additional researches have come to hand. Frerichs[9] claims that in one group of cases death occurs from cardiac failure due to cardiac degeneration. The other groups are the result of intoxication; a series of changes take place in the blood the ultimate products of which, aceto-acetic acid and aceton are known, but the initial products are not. Jaksch[10] finds that there are four types of acetonuria: Febrile acetonuria, glycosuric acetonuria, acetonuria from cancer, acetonæmic acetonuria. He has also found that acetonuria results from hydrophobia. The occurrence of acetonuria in this latter disease points to vaso-motor perturbation as the cause rather than the result of acetonæmia. This is further borne out by the observations of Mackenzie[11], who has never been able to detect acoton in the breath, and but rarely in the urine of comatose glycosurics and his autopsy results have been equally negative as regards aceton. My experiments with the injection of aceton into glycosuric dogs have had negative results. The lipæmia theory seems equally untenable, for injection of finely divided fat is without effect and Mackenzie[1] has found that lipæmia is not a constant attendant on glycosuric coma. Hilton Fagge,[2] believing that blood dehydration was a cause of coma, injected saline solutions into the veins with temporarily favorable results; this theory is also held by Féré[3] and T. A. McBride.[4] Ebstein[5] is of opinion with Senator[6] that aceton retention is the cause of coma and this retention is due to changes in the renal epithelium, but this only adds increased difficulty to the aceton theory for, despite the fact that molecular renal epithelial changes might produce this result in cases where renal changes are not demonstrable, still many cases in which marked renal changes exist do not become comatose. Teschenacher[7] suggested that a shock to the sympathetic from changes going on in the intestine was the cause of coma, and Saundby[8] is inclined to the same opinion. Taking into account the facts, that all types of coma can be produced without the presence of aceton, that there are apoplectiform as well as epileptoid types, that coma may occur early in the disease, that physical and mental strain is detectable as the exciting cause in the great majority of cases, and recognizing that hysterical and epileptoid attacks may occur from the same exciting causes, it would seem that Pavy's[1] theory somewhat modified will best explain all cases; Teschenacher's[2] theory is only a modification of this. I regard coma as the response to a sudden strain upon an unstable

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[2] Centralb. f. Augenheilk. Band VI.
[3] Gazette Hebd., Nov. 7, 1861.
[4] Ibid.
[5] New York Medical Journal, Vol. XVII.

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[1] Op. Cit.
[2] Op. Cit.
[3] Diss. Jena.
[4] Senator Op. Cit.
[5] Ibid.
[6] Gazette des Hopitaux, 1877.
[7] Op. Cit.
[8] Op. Cit.
[9] Op. Cit.
[10] Op. Cit.
[11] Deutsche Klinik, 1867.
[12] Gazette Hebd., 1873.
[13] Op. Cit.
[14] Op Cit.
[15] Op. Cit.

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[1] Op. Cit.
[2] Op. Cit.
[3] These de Paris, 1881.
[4] Op. Cit.
[5] Il Morgagni, 1881.
[6] Op. Cit.
[7] Journal de Medecine de Bordeaux, Jan. 1, 1882.
[8] Nervous Diseases in Diabetes.
[9] Berlin Clin. Woch., March, 1883
[10] Zeitschr. f Clin. Med., Nov. 1882.
[11] British Medical Journal, April 7, 1883.

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[1] Op. Cit.
[2] Guy's Hospital Reports, v. xix.
[3] Op. cit.
[4] Med. Record, Aug. 25, 1883.
[5] Senator Op. cit.
[6] Op. cit.
[7] Mackenzie Op. cit.
[8] British Med. Journal, April 7, 1883.

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[1] Op. cit.
[2] Op. cit.

vaso-motor system; the instability of which is due to the constitutional condition which produces glycosuria; the neuro-patho-anatomical changes found by Pavy[1] and Dickinson[3] show that decided vaso-motor perturbations mark the course of the disease, the aforesaid changes being obviously secondary to these.

That the lungs are often affected in glycosuria has long been recognized; phthisis and pneumonia are far from infrequent. Leyden[4] states that glycosuric phthisis has an insidious onset; febrile phenomena are absent; expectoration is slight and hæmoptysis is infrequent. Endarteritis obliterans is a prominent lesion. Tuberculosis may be a primary affection, but from this the type of phthisis just described is distinct. Glycosuric pulmonary gangrene has an odorless sputa and the symptoms are not marked; it is obvious that glycosuric phthisis and pulmonary gangrene resemble the same diseases as found in the insane. Lecorche[1] calls attention to a glycosuric endocarditis which is much more frequent among females than males. It appears late in the disease and more often in the milder forms. It is generally seated at the mitral orifice and but rarely involves the aortic. Its presence is indicated by an apex murmur and an irregular, intermittent pulse. Frerichs[2] claims that renal disease and glycosuria do not co-exist as often as has been supposed; of three hundred and sixteen cases coming under his observation only sixteen gave evidence of renal disease, and of these sixteen but three were pure. Senator[3] states that in the majority of cases renal lesions are found. The kidneys are as a rule abnormally large, firm, and heavy, containing an abundance of blood, but no evidence of textural changes is presented. True nephritis is rare; renal pelves and the ureters are frequently affected. Vesical catarrh is very frequent and gives rise to a symptom of glycosuria-pneumaturia, to which attention has been recently directed by Guiard.[4]

Marchal[1] (de Calvi) was of opinion that "in cases of obstinate furunculosis, of carbuncle, of diffuse phlegmonous inflammation, gangrene, etc., the urine should be examined for sugar;" this opinion has since been confirmed by other observers. Roser[2] states that in all cases of gangrene or ulceration without obvious cause the urine should be examined, since many such cases are due to glycosuria and not to sepsis. Myosuria is very common, and points to an explanation of muscular weakness. In certain cases of the lean variety of glycosuria the pancreas is demonstrably involved, and in others pancreatic affections are very probable. This involvement is coincident with or antecedent to glycosuria, and in all probability is a great factor in the production of emaciation. The same is true also of gastric and intestinal affections.

Senator[3] states that all febrile affections occurring during glycosuria affect it favorably, but this rule is not invariable; the fat form is made worse by high pyrexia and the lean by typhoid fever. The fat type has been favorably affected by dysentery. The peculiarities of the coma and of the other complications can be best explained on the vaso-motor neurosis theory of the disease. Phthisis of the kind indicated is, as already stated, a very frequent complication of the vaso-motor psychoses; renal disease is as infrequent in them, despite very favorable circumstances, as it is in glycosuria. Ross[1] says: "The vaso-motor nerves of the liver take their origin on the floor of the fourth ventricle and pass through the cervical and upper dorsal regions of the spinal cord and the *rami communicantes* opposite the fourth or fifth dorsal vertebra, to join the sympathetic, and ultimately enter the organ as the hepatic plexus. Injury to these fibres at their origin in the fourth ventricle, in any part of the spinal cord, or of the sympathetic itself, is followed by glycosuria." Frumet[2] de Fontarce is of like opinion. On careful examination there is found precedent to most of the reported cases cerebral hyperæmia from overwork or anxiety, and at the same time extra strain on the digestive apparatus. In certain cases predisposed by heredity or injury these two influences act in a vicious circle; the hyperæmia acts on the cerebral vaso-motor center to increase the digestive difficulty and to produce *per se* glycosuria. The digestive difficulties act through the sympathetic on the vaso-motor centre itself in an indirect manner, as explained by Senator, to cause glycosuria. From this inter-action in a vicious circle the vaso-motor centre becomes perverted and glycosuria remains a permanent condition. In a second class of diseases digestive difficulties arising from mental overwork produce cerebral anæmia, which results in changes of the functions of the pancreas and intestines, and finally in the structure of those organs, already weakened by digestive strain. The cerebral anæmia interferes with the function of the cerebral hepatic fibres and at the same time a gastro-intestinal condition reacts on the cerebral condition and the lean form of glycosuria is the result. In some cases tuberculosis is the origin, at once, of the intestinal and cerebral conditions.

This theory explains many seemingly contradictory facts; it explains at once why pyrexia should cause and improve glycosuria; it explains why glycosuria occurs after apoplectiform and epileptiform attacks; it explains why opium on the one hand and chloral on the other should cause glycosuria, and why the first should benefit it; it explains the varied glycosuric neuroses, the peculiar phthisis and other complications.

Therapeusis can now be discussed with some clearness. The treatment by drugs is the first matter requiring analysis. The drugs used can be divided into two great classes; those acting on the digestive organs and those acting on the brain; the latter are again divisible into those producing cerebral hyperæmia and those producing cerebral anæmia. Among those acting on the digestive organs may be mentioned the alkaline waters. Cornillon,[1] for example,

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[3] Op. cit.
[1] Zeitschr. f. Clin. Med. Band IV.
[4] Op. cit.
[2] Deutsch Med. Woch. No. 24, 1883.
[3] Op. cit.
[4] Annal des Mal. Gen. Urin., June, 1883.
[1] Op. cit.
[2] Deutsch Med. Woch., 1880.
[3] Op. cit.
[1] Diseases of the Nervous System.
[1] Path. Clin. du grand Sympathetique.
[2] Op cit.

[1] Progrés Med., Jan. 1880.

claims that the use of these is attended by very decided amelioration, and that the use of the alkalies seem to reëstablish the functions of the digestive organs. This testimony only corroborates that of Senator,[2] Seegen,[3] Kretschy,[4] Külz,[5] and others. It will be obvious that the alkaline waters act only on the digestive organs, and remove or modify one element of the vicious circle which produces glycosuria. On the theory already given, their use would be indicated in both varieties, but most in the anæmic, and in this they have given very favorable results. Potash permanganate recently used by Masoin,[1] had an influence on the digestive organs, and to this, if anything, is due what influence it has on glycosuria. To the same origin may be ascribed the favorable effects attendant upon the use of lactic acid, advised by Cantani,[2] and of soda citrate, advised by O. C. Knight.[3] On the same principle, we may explain the results obtained from the administration of calcium, by Dare,[4] Flint,[5] Halstead,[6] and others, more especially as Fleury[7] has shown that the evolution of sugar is attended by the evolution of free sulphur, which would be checked by the presence of a sulphur compound tending to produce retrograde metamorphosis. Ammonia is claimed by Adamkiewitz[8] to act in like manner, but it is obvious that its action on the brain might interfere with its action on the digestive organs, and in the fat cases, it has been shown by Guttman[9] to exert a deleterious influence. Uranium nitrate is another agency acting chiefly on the digestive organs, and sometimes on the brain. To this combined action can be referred the good results obtained by de Cailhol,[1] Dale,[2] and H. A. Wilson.[3] Opium and its alkaloids are the drugs whose action in producing cerebral hyperæmia is most marked, and whose effects have been found most decided in the lean form by Ætius,[4] Pavy,[5] Shingleton Smith,[6] Watson,[7] Senator,[8] Tyson,[9] Rollo,[10] Kratschmer,[11] Pelham,[12] Warren, Aitken,[13] Image,[14] and others. Codeia and its salts are for many reasons to be preferred, and, according to Pavy,[5] are capable of effecting a cure without other treatment; one case reported by him seems to have been of hysterical origin, and, therefore, of doubtful value. Brunton[15] confirms Pavy's results. Iodoform, an agent capable of producing cerebral hyperæmia, has been found useful in glycosuria by Moleschott[16] and Bozzolo.[17] Peroxide of hydrogen, which has a like property, was found of value by Day.[18] Salicylic acid, which also produces cerebral hyperæmia, has given good results in the hands of Ebstein.[19] Pilocarpine acts on the the brain in like manner, and has been found by Charteris[1] to yield good results. Carbolic acid and creosote, which also produce cerebral hyperæmia, have been found useful by Millard,[2] Blau,[2] Thoresen,[2] Ebstein,[2] J. Müller,[2] Bernd,[2] Hufeland,[2] Kraussold,[2] and Boese.[2] Quinine, which has been shown by Hammond and Roosa to produce decided cerebral hyperæmia, has been found very effective in glycosuria by Blumenthal,[2] Mayer,[2] Deihl,[2] and Carlatti,[3] who has for the same reason found eucalyptol of value.

Of the agents producing cerebral anæmia, ergot has been found of value by Tyson,[5] Hunt[4] and others. Arsenic, from the fact that it exerts a direct influence on the vaso-motor centers of the medulla; that it diminishes the amount of blood in the brain, has been attended with by far the best results. It will prevent the temporary glycosuria produced by puncture or irritation of the fourth ventricle; a fact which was first noticed by Quinquad,[6] whose results were confirmed by Longueville[7] and which I have personally verified. The drug has been found of great value in glycosuria by Flint,[1] Pap,[2] Longueville,[3] Clemens,[4] Leube,[5] Berndt,[6] Senator,[7] W. L. Lehmann,[8] Devergie,[9] Tyson,[10] Gilliford,[11] Emmerling,[12] Bokai[13] and others. The bromides were early proposed by Begbie[18] and have been found of value by Flint,[14] Vantraa,[15] Dujardin-Beaumetz[16] and others. The potassium salt is contra-indicated because of its being a muscle poison, and therefore tending to set free inosite and thus weaken the muscles. Bromine has a most decided action on the liver; a fact to which attention has been called by Jewell.[17] The combinations lately made of bromine and arsenic seem likely to be of especial value. Taking all the facts cited into consideration it is obvious that there is no specific for glycosuria.

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2 Op. cit.
3 Op. cit.
4 Senator. Op. Cit.
5 Op. Cit.

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1 Bull. de l' Acad. Roi de Med Belg. XVI, 1882.
2 Il Morgagni, 1881.
7 Op. Cit.
3 Detroit Lancet, Sept. 1883.
4 Cinn. Lanc. and Clin., Dec. 11, 1880.
5 Amer. Med. Weekly, July 5, 1881.
6 Jour. of Cut. and Ven. Dis., 1883
7 Op. cit
8 Revue de Therap., 1882.
9 Berlin Klin. Woch, No. 38, 1880.

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1 St. Louis Clin. Record July, 1878.
2 Boston Med. and Surg. Journal, Vol. C.
3 Medical Bulletin, March, 1880.
4 Pavy, Op. cit.
5 Op. cit.
6 Op. cit.
7 Op. cit.
8 Op. cit.
9 Op. cit.
10 Tyson, Op. cit.
11 Ibid.
12 Ibid.
13 Op. cit.
14 Tyson, Op. cit.
15 British Med. Jour., 1874.
16 Wien. Med. Woch, No. 17, 1882.
17 Gazzeta degli Hospitali, Feb'y 4, 1883.
18 Australian Med. Jour., July, 1882.
19 St. Petersburg Med. Woch, an. 14, 1833.

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1 Lancet, Sept. 5, 1880.
2 Senator, Op. cit.
3 Schmidt's Jahrb.. B. CLVII, 1873
4 Practitioner, Sept. 1880.
5 Op. cit.
6 Bull. gén. de Thérapeutique, Sept. 30, 1882.
7 Journal de Thérapeutique, July 15. 1883.

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1 New York Med. Jour., June 30, 1883.
2 Wien. Med. Presse, 1875.
3 Op. cit.
4 Berlin. Klin. Woch, 1882.
5 Tyson, Op. cit.
6 Senator, Op. cit.
7 Qp. cit.
8 Academ. Proefschrift, 1873.
9 Gazette Med. No. 22, 1870.
10 Op. cit
11 Pittshurgh Med. Jour., July, 1883.
12 Med. and Surg. Reporter, June 10, 1883
13 Orvosi Hetilap. No. 1 to 3, 1883.
14 Op. cit.
15 Senator, Op. cit.
16 Progrés Med., July 29, 1883.
17 Chicago Med Rev., Vol. V.
18 Lancet. 1865

Hygienic treatment: The glycosuric should indulge in moderate exercise, breathe pure air and bathe frequently in water in which a little soda has has been thrown. All business worry and intellectual strain should be avoided. If the patient be a physician inclined to hypochondria all glycosuric literature should be prohibited.

The complications which require special treatment are the vesical catarrh, the balano-posthitis and the coma; in the first Guiard has found solutions of silver nitrate (1 to 500) and of boracic acid (1 to 20) of considerable use. Cleanliness and the use of weak antiseptic solutions will soon cure the balano-posthitis; Simon recommends that the inside of the prepuce be covered with the following powder:

℞—Zinc oxid.....ʒi
Amyli.....ʒi
Acid. Salicyl. Pulv.....ϑi—M

It is obvious from what has been said that the two great indications in coma are, to sustain the heart's action, and to produce derivation from the brain. This last is doubly indicated in cases where the exciting cause of the coma is the occurrence of fermentative changes in the intestine. Schmitz and Shingleton Smith have had results of value from following these indications.

The dietetic treatment is all important, and the table given by Tyson[10] is of sufficient value to merit recommendation.

Conclusions: First.—Glycosuria, properly so-called, is met with in two forms; one due to cerebral anæmia—the "lean form;" the other due to cerebral hyperæmia—the "fat form." In both digestive derangements act in a vicious circle on the cerebral condition. The indications, therefore, are to modify the cerebral circulation and to relieve the digestive derangements. The last can be accomplished by dietetic treatment, by proper hygiene, and by the use of remedies like the alkaline waters. The first is accomplished indirectly in the manner just described, and directly by the use of opium, codeine, morphine, quinine, salicylic acid, iodoform, carbolic acid, etc., in cerebral anæmia; in cerebral hyperæmia by the use of arsenic, the bromides, ergot, etc.

Second.—In cerebral anæmia it may be desirable to alternate the agents useful in that condition, and a combination of quinine and codeine or quinine and morphine, or quinine and glonoin, can be used with advantage.

Third.—In judging of the effects of treatment the fact that senility, pregnancy, hysteria, epilepsy and other nervous diseases, cause prolonged intermittent types of glycosuria should not be forgotten.

Fourth.—In certain cases of glycosuria there is a normal equilibrium nearly established, for which reason dietetic or other treatment may *per se* prove curative.

Fifth.—A combination of the alkaline waters and the cerebral agents mentioned is likely to be of value in all cases; the cerebral agents being varied to suit the case.

Sixth.—That in all probability most if not all cases of coma in their early stage do not have a toxic element about them and are therefore remediable by intestinal derivation. In all cases, cardiac stimulation is indicated, and at no stage is either intestinal derivation or cardiac stimulation contra-indicated.

Seventh.—That small doses of pilocarpine may be found of value in treating dryness of the mouth and that mild antiseptic washes are useful in relieving uncomfortable sensations therein.

Eighth.—That it is probable that temporary glycosuria, resulting from pregnancy, etc., becomes permanent when the patient is exposed to too much mental or physical strain.

TREATMENT OF THE OMENTUM IN OPERATIONS FOR OBSTRUCTED OR STRANGULATED INGUINAL HERNIA.

BY J. R. WEIST, M.D., RICHMOND, IND.

[Read before Union District Medical Society, Oxford, Ohio, Oct. 25, 1883.

When operating for obstructed or strangulated inguinal hernia, the surgeon is frequently embarrassed by questions that arise in relation to the best method of dealing with the omentum so often found in the hernial sac, as he generally finds this structure greatly changed from its normal condition, by either inflammation or hypertrophy, the latter condition being commonly met with in old cases of irreducible hernia.

The omentum is well known to be much less capable of resisting the effects of inflammation than the intestine; this is especially true when it is loaded with fat, as it nearly always is in corpulent subjects. In such cases a degree of compression that only very slightly endangers the bowel is sufficient to deprive it of vitality. At the same time the visible effects of inflammation of the omentum are less marked than in the bowel. The bowel when dangerously inflamed is greatly discolored, and the arborescent arrangement of its vessels may be clearly seen. The omentum on the other hand may be undergoing inflammatory changes sufficient to destroy its vitality, without showing any marked change of color, its vessels being only marked by a few faintly seen perpendicular lines. It is true that when subjected to violent or protracted inflammation, the omentum shows a decided loss of consistence, but any manipulation sufficient to discover this is dangerous, as slight pressure by the fingers will often convert it into a pulpy mass. Because of its lower power of vital resistance, an inflamed omentum is much more likely to die after being returned within the abdomen than a correspondingly inflamed bowel; and its hould be always remembered that when returned in the condition described the mass is likely to act as a foreign body and induce a fatal peritonitis. It is, indeed, not necessary that destructive changes advance to this degree to light up a dangerous inflammation within the abdomen. When there is much hypertrophy, a condition often seen in old hernias, a slight inflammation may readily pass into a destructive one, because of its low vitality, and this danger is increased, for the reason that the size of the misplaced tissue makes necessary for its

reduction a good deal of rough manipulation. Aside from the danger of inflammation there is the objection to returning a large mass of omentum that the opening in the abdominal wall through which it has protruded must be so much enlarged as to greatly favor the protrusion of some portion of the contents of the abdomen at a future time.

When adhesions exist between the omentum and the hernial sac, the objections already mentioned to a return of the former apply, and there is the additional one, that when the adhesions are of long standing, their breaking up causes the rupture of numerous small vessels which may not bleed while under the eye of the operator, yet do so after the replacement within the abdomen has been effected. This blood in the cavity outside the vessels, even when small in quantity, becomes an element of extreme danger, as is shown by actual experience in herniotomy and oftener in ovariotomy.

These dangers attending reduction of the omentum are generally recognized by the profession, and surgeons are usually agreed that only when it is small in quantity, healthy in character, and apparently recently protruded, should it be returned, but as to the other methods of dealing with it there is not complete unanimity. Some surgeons advise that it be left in the sac, and others that it be removed. My own experience has led me to the conclusion that it is safer not to return it in any case. In two of my cases of inguinal hernia in which strangulation had recently occurred, and apparently in all respects favorable for an operation, the sac was found to contain both omentum and intestine. The former being small in amount and only slightly congested, was returned after the reduction of the latter. At the time of the operation there was no evidence of abdominal inflammation, yet a fatal peritonitis was developed; one patient died in thirty-six hours after the operation and the other in fifty hours. In both cases a post-mortem examination revealed the usual signs of a general peritonitis, yet the intestine had so completely recovered, the portion that had been strangulated could not be recognized. A portion of the omentum was in one case gangrenous, in the other, highly congested and softened. It was easy to decide that the portion of omentum returned was the starting point of the peritoneal inflammation in both instances. A study of these cases has satisfied me that in others where death followed an operation the unsuccessful result was owing to the same cause. In another fatal case—not my own—in which the omentum had been returned after the separation of adhesions existing between it and the sac, I found on opening the abdomen after death that considerable hæmorrhage had taken place from the portion of omentum that had been in the sac. The blood was in a state of decomposition, and the other conditions present made it apparent that it originated the series of changes that had ended in death.

The fact that occasional recovery follows the return of a large mass of omentum that has been subjected to rough treatment in separating adhesions and forcing it into the abdomen through a small opening does not invalidate the rule I am seeking to establish. In every case in which I have returned a large mass of omentum peritonitis has been developed. The following cases are examples:

I. H.; American; R. R. clerk; 24 years old; applied to me for an operation on an irreducible inguinal hernia. I shall give only a mere outline of the case. Four years ago he was struck by a falling box on the right inguinal region. Pain and swelling followed, both at the seat of injury and of the scrotum; the latter never disappeared, and frequently all the symptoms of strangulated hernia appeared, to subside again after one or two days. During the last three or four months the attacks have been so frequent and severe as to prevent him from doing any work. Prominent surgeons in Columbus, Indianapolis and elsewhere have been consulted. While the opinions given in relation to the case varied somewhat, there was a general agreement that an operation would be dangerous, and the surgeons consulted declined to undertake it. The patient had suffered so much, he was willing to incur any risk, if there was a hope of his ultimately obtaining relief. After making a careful study of the case, and corresponding with one of the most prominent surgeons previously consulted, who opposed the operation, I decided to comply with the wishes of the patient. When the operation was made, the injured canal and the scrotum were found filled with a mass of omentum, about six inches in length, and three inches in thickness, at its largest part. Firm adhesions existed between the sac and its contents, while the atrophied testicle and the cord at its lower part were firmly adherent to the omentum. The various adhesions were separated, the testicle and part of the cord removed, and the omentum returned into the abdominal cavity. The last procedure was difficut of execution. A part of the sac was removed, and a fold of the remainder retained in the internal ring, by sutures passing through it and the external borders of the ring, the ends of the wires being passed through the overlying skin and twisted over a small roll of adhesive plaster. Peritonitis followed, seriously threatening the life of the patient. Although perfect recovery, with a radical cure of the hernia, finally resulted, I am satisfied that had I removed the omentum, much less danger would have been incurred.

II. F.; American; farmer; 48 years of age; had a small left inguinal hernia for six years. During this time he had generally worn a truss. Ten days before consulting me his truss was broken. The hernia descended and could not be returned. Soon the characteristic symptoms of strangulation appeared. A physician failing to accomplish reduction, I was summoned. I found a swelling about three inches in length and one and a half inches in width, extending from opposite the external abdominal ring into the upper part of the scrotum. An anæsthetic was given, and failing to accomplish reduction, I used the knife. The hernia was found to be the direct variety, the sac containing omentum only. The stricture was not tight; the omentum free of adhesions, and only slightly congested. The mass was easily returned into the abdomen, yet within twenty-four hours a dangerous peritonitis was devel-

oped, from which the patient only slowly recovered.

The following brief report of two cases unlike in character, fairly present the results of my experience since adopting another mode of practice, and at the same time show what I believe to be the best method of procedure in similar cases.

III. K.; Irishman; 71 years old; after having an irreducible right inguinal hernia for many years, suddenly presented the symytoms of strangulated hernia. He being under the care of a homœopathic doctor, practically nothing was done to afford relief during five days. At this late period I was sent for. I found the patient in a state of collapse, but as the patient and his friends urgently demanded an operation, I used the knife. The hernial tumor was unusually large, and contained a loop of small intestine three inches in length, and a mass of hypertrophied omentum at least four inches in diameter. Adhesions were found between the intestine and the omentum, and between the latter and the sac. These were taken up, the stricture divided, and the intestine returned into the abdomen. The omentum was transfixed by a wire suture, just outside of the internal ring. The wire also passed through the borders of the ring. The ends were twisted together and cut off short. A strong double silk ligature was passed through the omentum just below the suture, and each half strongly tied. The omental mass below and most of the sac were then cut off, and the wound partly closed. After the operation the patient soon rallied, but little suppuration followed, the ligatures separated in fifteen days, not a single unfavorable symptom appeared, and rapid recovery followed. A radical cure of the hernia was effected, as during the three years since the operation it has not reappeared. The wire suture remains in the tissues.

IV. S.; German; 54 years old; had double inguinal hernia for 47 years, and wore a double truss during the last sixteen years. Owing to some defect in the truss the right hernia protruded in June last and could not be reduced. Some pain in the tumor followed. The physician who was summoned thought he twice reduced a part of the tumor. In this he was probably mistaken. I first saw the patient ten days after the accident. The pain and swelling had not abated, and I found the tumor extending from the internal abdominal ring to the lower part of the scrotum, being about eight inches in length and three inches in diameter at its thickest part. The tumor being hot, tender and painful with an absence of obstruction of the bowels and of threatening constitutional symptoms, I counseled delay and the use of hot applications to the swelling. Eleven days later I again saw the patient. The symptoms had gradually grown worse. The tumor was larger and more tender, and the vital forces generally failing. Assisted by Drs. Sutzi, Duiggins and Bond I operated without longer delay. An incision about eight inches long was made into the tumor. A considerable quantity of pus was found, and a large mass of omentum adherent to the sac and in a state of inflammation. The testicle was found in the lower part of tumor, the tunica vaginalis containing considerable fluid. This was freely divided to secure a radical cure of the hydrocele. The omentum was separated from the sac after much trouble, fixed in the internal ring by a wire suture, ligated and divided as in the preceding case. A large part of the sac was also cut away. The upper part of the wound was closed by sutures, and carbolized water dressing applied. But little pain followed the operation, anodynes being at no time required. The general condition of the patient rapidly improved. Free suppuration occurred, but no trouble within the abdomen. The wound was daily syringed with water containing carbolic acid. The patient was able to sit up in two weeks. The ligatures separated on the sixteenth day, and the wound was entirely healed at the end of four weeks.

Other successful cases in which omentum was removed might be reported, but these are sufficient to contrast the results following the removal of the omentum with those following its return into the abdomen. I have had this experience. In no case in which I have cut away omentum with or without a portion of the sac has either peritonitis or a fatal result taken place; of course this experience is largely the result of accident, as various conditions independent of our method of dealing with the omentum, may cause either peritonitis or death, but an examination of the subject and my experience has convinced me of the correctness of the rule previously given.

Some surgeons advise leaving the omentum in the sac, but this method has disadvantages. The fat becomes inflamed, suppurates and sometimes sloughs, all of which delay the healing of the wound. If it contracts a tumor is left at the abdominal aperture after the wound has healed that may interfere with the application of a truss in the event of a reappearance of the hernia. The adhesions to the sac said to sometimes render necessary leaving the omentum, can be with a little care safely separated, whether recent or chronic.

It has been recommended that the omentum be cut off and after the separate ligation of each vessel, the stump returned into the peritoneal cavity; but this method is dangerous, as cases have occurred after every precaution was taken to secure the blood-vessels, in which a fatal hæmorrhage has taken place. An additional argument against this plan is, it takes away the best security against a reappearance of the hernia. When the omental stump is retained in the upper part of the inguinal canal by sutures of silver wire passing through it and the borders of the ring as I have described, a radical cure is almost sure to follow, for as a general rule I have found the sutures to remain permanent without causing irritation.

Some surgeons have assumed that various dangers attend tying a ligature around the omentum. It has been, however, demonstrated by experiment in St. George's Hospital and elsewhere, these are purely imaginary. We are informed by Mr. Holmes that in the hospital mentioned, "In no single instance has any untoward symptom been excited by the ligature of the omentum,"

Some surgeons, like Mr. Erickson, give instructions for securing the free ends of the ligature to prevent the omental stump slipping into the abdomen,

an accident almost certainly fatal. By my method such an unfortunate occurrence is rendered impossible. It offers an additional important advantage, the permanent suture generally secures a union between the stump and the borders of the ring by which the latter is effectually plugged, and a radical cure of the hernia effected.

RICHMOND, IND.

REPORT OF THE COMMITTEE ON MEDICINE OF THE KANSAS MEDICAL SOCIETY FOR 1882-83, READ AT THE MEETING IN TOPEKA, MAY 15, 1883.

BY W. L. SCHENCK, M. D.

[Published in advance of the Transactions of the Society.]

Your committee are not aware of any special progress in medicine during the year that has just closed, though the labors of many eminent men of the profession have doubtless resulted in healthful growth.

Philosophers entertain different views of growth. One school believes in a continuous development resulting from natural and fixed laws; another that all great, time-enduring monuments are the result of special inspiration.

Spencer says God in Nature, before all things, in all things, bringing forth by immutable law order, progress, growth.

Carlyle beheld Him above Nature, inspiring anew the human soul, and thus promoting progress.

To the one the event made the man; to the other, man the event. Both are in a measure correct.

The perception of truth, the conception of a great event, by an earnest soul gives the seeming supernatural power that enables one man to move millions—to roll the ages. Great truths lie hidden all around us, while the laws that move and develop the worlds, from the mightiest sun to the minutest molecule, from the spiritual life of man created in the image of God to the microzone, are fixed and immutable. God inspires whoever devotes the energies of his soul to the comprehension and demonstration of these laws, and inspires anew every soul that with living faith enters into intimate communion with Him, whether as He reveals himself in the material world or in the spiritual life. Hippocrates, Galileo, Newton, Bacon, Franklin, Morse, Milton, Shakespeare drank new, fresh draughts at the fount of inspiration.

Moses, with a lofty conception of spiritual truth, wrote the commandments, which are yea and amen.

Mohommed, profoundly impressed that "Allah is God and Mahomet His prophet," obtained over the inconstant bandits of the desert the power "of wielding, molding, gathering, widening, banding the hearts of thousands till they beat as one." Men prove themselves by their earnest devotion to truth as they perceive it. The ultimate influence of inspiration varies with the field occupied. The influence of the inventor and discoverer, though wide as the world, effects no world-wide changes in humanity. The physician is more inventor and discoverer than philosopher. Yet his whole life is a philanthropy, and as he unfolds more and more the laws of life and death, the relations of the spiritual to the physical, of mind to matter, he becomes more and more a philosopher, and here is a wide and fruitful opening for his labors. As we have not yet learned what either mind or matter are, we know not how they are united or the extent of their influence upon each other. Spiritual medicine is yet in its infancy. Scientific men have recently been giving more careful thought to this department of science, and it has suffered a great loss during the year in the death of our fellow countryman, Dr. George M. Beard, of New York.

We may deny the resurrection of the body because we believe it intrinsically incredible, but does not its incredibility rest simply upon the fact that it is exceptional? Unless we assume that nothing can occur that has not occurred, can it on that account be maintained as absolutely incredible? Must it not be shown impossible in the nature of things? This we cannot do, for we know too little of the nature of the things concerned—life, matter, and the link that binds them in one. The many well-attested instances of the going out of the spirit from the body, as under the influence of trance and clairvoyance, are about as intrinsically incredible as the resurrection of the Master, because they are beyond all we yet know of the laws that govern the connection of the mind with matter. In a sermon preached in Philadelphia, Easter Sunday, 1883, by Rev. Dr. Furness, he says: "The appearance of Christ after death being admitted, the common assumption that death is the utter extinction of life, is not merely negatived, but we see a little way into the mystery. We discover that the life that animated the body can, under certain conditions, resume its power over the physical frame. What those conditions are, the whole history of Jesus, his life, death, and emphatically his resurrection, reveal. All show there was in him an unprecedented quantity of being, a fullness of life—the life of faith in God, the life of love, which is the very essence of the Almighty One. So profound was his interest in the truth for which he had voluntarily surrendered his mortal existence, so strong was his affection for his poor bewildered disciples, that he must needs reappear to them to re-animate their faith and reassure them of his undying interest in them. And so, as one awakes early in the morning when some great thing is to be done, Jesus awoke from the deeper slumber of death. The resurrection of Jesus teaches us that life is a thing of degrees. As is our faith and love, so is the depth, the quantity of our being."[1]

Intrinsic incredibility would deny the miracles wrought by Christ, and yet they were in harmony with all we know of the influence of mind upon matter, of the spirit upon the body.

There may be those within, as well as without the profession, who will raise their hands when we seek to investigate the power by which the Christ wrought his "miracles," but we belong to that branch of the medical profession that circumscribes itself with no iron-bound creed, that accepts the whole pharmaco-

[1] The thanks of the committee are due to the sermon of Dr. Furness for several suggestions in this report

pæia of nature and art, whether spiritual or physical, whether moral or mental, animal, vegetable or mineral, as the beneficence of omniscience, and seeks to discover the possibilities of all. What progress can we expect from those who stand aghast at the investigation of any truth, or who denounce as always injurious any mode of depletion or repletion unless it acts specifically or in accord with some preconceived idea, and who thus withdraw from affiliation with those who adopt a broader faith and seek a wider field of knowledge? We are ready to investigate anything and to prescribe anything in any dose. All we ask is to know that it benefits, and to know, if possible, why and how. The true scientist does not attempt to circumscribe, but to comprehend, the wisdom and power of Omniscience and Omnipotence. The wise physician will not proclaim in advance any inexorable law of *alia aliis similia similibus* of specifics or dynamizations and thus deny himself association with men of larger views and opportunity of garnering from broader fields. Science never advances on such a basis. The father of medicine as a science, laid down a broader platform. Among his aphorisms we find "some diseases are cured by contraries, some by similars." And the famous saying of Corus in his controversy with Hahnemann applies equally well to all narrow sects in medicine: "Whatever is new in homœopathy is not true, and whatever is true is not new." No narrow and exclusive dogma ever developed such men as Hippocrates, Harvey, the Hunters, Jenner, Loanec, Bechat, Boerhaave, Cullen, Magruder, and a host of others who have made valuable additions to the science of medicine.

Though we do not yet comprehend either life or death, or the link that binds in one soul and body, the broad and earnest search after truth enables us to know much that was once inscrutable, and bids us push forward with the full assurance that we shall yet penetrate the secret of life, the power of the spirit over the body and their bond of union. Need we longer resort to the theory of miracles, as commonly understood,—the interruption of laws already existing or the creation of special laws for the occasion,—to explain the well-attested cures of the Great Physician? or do we detract from his glory when we concede a wisdom that comprehended and co-operated with the great central laws of nature—the power of spirit over matter? He claimed for them no supernatural power, but rather that they were in harmony with the laws of spiritual and physical life. When his disciples failed to effect similar cures his expression was, "Oh, ye of little faith!" His thought seems to have been "all things are possible to him that believes." In faith he saw a sovereign power working in and through man in unison with eternal law. Through its power the insane were cured, the dumb spake, and the lame walked. The spirit of man is but a scintillation from the Infinite. Who shall limit its power to energize brain and nerve and through them vitalize the whole body?

The Master seemed himself surprised at his wonderful cures, but, profiting by experience, his faith in faith daily increased. Avoiding all undue publicity, steadfastly adhering to his one great thought, he used his power over the body only to win men to the theology he proclaimed: "Except ye see signs and wonders ye will not believe." Many are wont to consider his faith-cures exceptional. But like cures have occasionally been wrought all down the ages. The history of the Papal Church is full of them. Sixty years ago Ramohun Roy translated the "Precepts of Jesus." He omitted his miracles, because, as he said, "they are much less wonderful than those handed down to the people of Asia." Christ fully recognized in faith a curative force open to all, and hence said to his disciples; "The works that I do ye shall do also, and greater works than these." Though thus clearly taught eighteen hundred years ago, it is as yet but feebly apprehended, though we have all observed or known cases where a mental impression killed or made alive. Dr. Chambers, in his work on "The Indigestions," gives the following case: "Rev. N. R., a bachelor of middle age, * * * In November he came to me again, saying that when he dined in company he could digest anything, and never suffered, however rash he had been at table; but when he took his meals alone for several days together, his old symptoms of the previous year returned, and no carefulness or abstemiousness prevented them."

Here an unappreciated action of the mind, which through sociability unlocked, or through mental abstraction locked up the energies of the brain, prevented or produced painful digestion.

Dr. Nathan Smith, the founder of Dartmouth Medical College, gave the following case from his practice: He was called up the Connecticut to see a patient who had long been pronounced a hopeless paralytic. A careful examination failed to reveal any lesion. He directed the patient—a maiden lady—to be placed at a given time in a certain relation to the bed and the door, so that upon opening the door she should be fully exposed, and stripped for a shower bath. At the moment the doctor opened the door, when the patient sprang into bed and covered her nakedness.

Here we have an instance of the power of the will over the body, paralyzing its muscles or stimulating them to activity. All have doubtless heard of the Chicago faith doctor who a few years ago hired a suite of rooms, flooded the papers with his advertisements, paid a reporter to make daily reports of the number who hobbled up his front stairs and went rejoicing down the back way, and the number of canes and crutches deposited in the back-yard. N. B., who had been confined to his bed under the care of a prominent Chicago physicia for several weeks read the reports and told his physician he decided to try him. He was sent for and after such delay as would increase the anxiety of the patient visited him. Looking quietly at the patient he bade him sit up, get up, draw on his pants, walk, run, pull on his boots, go down stairs and back. He was promptly obeyed by the astonished patient, even to the command "pay me fifty dollars." When the doctor had gone he sat down to think, to wonder, to doubt and soon to find himself as helpless as ever.

Here faith cured, but a doubt produced relapse.

Why repeat cases? The world is full of people staggering to the grave with every variety of disease engengered by anxious care, and full of cures wrought through the mind. Every physician knows the difference in the curative power of his prescriptions when his patient is animated by faith and when faith halts, perchance through the influence of some meddlesome neighbor, perchance the runner of some nefarious doctor. Every physician has found patients who refused to confirm his prognosis, living when they should die, or dying when they should live. In the one class the will, through faith, energizing the brain until a nervous force was generated that imparted power to remove the causes of disease and repair wasted tissue, in the other through lack of faith there was no removal of disease poison, no renewal of wasted tissues, no life. How other than through the force of faith can we explain cures wrought under the dynamizations of Hahnnemann, or by the egotistic quack whose patient often recovers despite his treatment? How also explain the cures by prayer divines record? It is not because the Infinite has stopped to rectify mistakes, but "Faith springs exultant on triumphant wing," energizing brain and heart, absorbent and excultant until gaunt disease gives place to rosy health. And why should not faith cure? We cannot conceive of any physiological action not under the direction of the nervous system. It supplies the energy that causes the salivary, gastric and intestinal glands to secrete digestive fluids; the force that enables the muscles to masticate and move the food, that endues the absorbents with power to take up and carry the chyle into the circulation; that energizes the heart and circulatory vessels to distribute it to the body; that endues the glands with elective power and enables them to remove morbid material. That everywhere directs and controls both constructive and destructive metamorphosis.

We expect our prescriptions to produce favorable results by destroying and removing *materies morbi* and by correcting defective force and nutrition and to produce these results largely through the medium of the nervous system. Life is the energizing power, given by the spirit, through the nervous system. Remove the spirit and there is death. Prevent the transmission of nervous influence to any organ or muscle and there is paralysis, atrophy, death. Obstruct its transmission and there are various functional and pathological changes. The spirit, enthroned in the nervous system, can by its power over this system—through faith, often begotten of faith, faith in a strong life, faith in the physician, faith in the might and goodness of God—energize every part and action of the body until functional diseases are relieved, morbid material removed and organic changes restored. While this wonderful force may not do all things we should effect through it much more than we yet know or think.

The most wonderful advance in medicine made during the year is the discovery that the germ theory of disease is settled. We quote from a lecture by Robert F. Weir, M.D., reported for the *Médical Gazette* of March 31, 1883.

"In 1877-78, when my attention was first directed to this subject, the battle was being fiercely fought between the supporters of the germ theory of putrefaction and the defenders of the older doctrines, but the question has now been settled in favor of the new theory, and you know that since then many other diseases have been found to have their cause in the presence of certain germs. * * * So that now it is a generally accepted fact that putrefaction is due to the presence of bacteria life in the tissues, and also that if you destroy the bacteria life you will put a stop to the putrefactive change. * * * The three best antiseptics are: first, carbolic acid; second, iodoform; third, corrosive sublimate. In using carbolic acid it is found that one part in twenty of water is the safest to arrest bacteria life."

The theory is settled by its being generally accepted that septic disease is due to bacteria life, and if you destroy the bacteria life you arrest the disease; a 5 per cent. solution of carbolic acid being the "safest to arrest bacteria life." Is a theory in science settled by general acceptance? Because apparently true, the movement of the sun around the earth was once generally accepted. Hang out a piece of meat on a warm day and it is soon filled with the larvæ of the green fly. Dip it in a 5 per cent. solution of carbolic acid and you destroy the larvæ and arrest septic change. Does it follow as a logical, scientific deduction that the septic change was due to the larvæ, or its arrest to their destruction? Exposed wounds fill with bacteria life and have been known to fill with the above named larvæ; by applying carbolic acid you destroy the life that feeds upon putrescence and at the same time arrest zymosis. Do you thereby prove the life caused the putrescence or its death caused its arrest? Certainly not, if it is to arrest disease by internal administration, and that "solutions of one part of carbolic acid in twenty of water is the safest." The average adult man weighs 160 pounds, of which one-eighth, or twenty pounds, is blood. The quanty of carbolic acid "safest to arrest bacteria life" in him would be five ounces, and that would probably prove not an over safe dose.

This theory of the germ production of disease, and the tests as given by Dr. Wier is of no practical advantage. Cure by germicides is impossible, whilst a very small quantity of the proper antiseptic will often arrest septic changes and restore health regardless of its effect upon the associated microzones. Is it not hence more rational to seek in diseased bioplasm, whose particles are many hundred times lighter than starch corpuscles, or the scales of an insect's wing, whose cells contain the inherent power of reproduction pertaining to the normal cell, the cause of septic disease and the arrest of septic changes; or to seek in the wonderful law of chemical affinities changes in organized matter induced by contact with matter undergoing similar changes?

The fact that the varied forms of germ life may and do exist in the body without producing any of the diseases attributed to them, added to the fact that the per cent. of an antiseptic required and used to arrest septic disease will not destroy these germs, ought to settle this vexed question on a very different base from the one on which Dr. Wier claims it is settled.

Special forms of micrococci may increase in each specific decomposition, finding there their chosen food, and hence may prove valuable aids in both diagnosis and prognosis, and we may find the aseptic agent also a germicide, but we must distinguish in diagnosis and treatment between the *post hoc* and *propter hoc*.

Dr. Geo. M. Sternberg, Surg. U. S. A. (*American Journal Med. Science*, April, 1883), has, by elaborate and definite experiments, shown the exact strength of the various antiseptics necessary to destroy bacteria life. "Mercuric Bichloride: The value of this potent agent as a parasiticide for external use is well established. * * * The proportion in which it prevents the development of septic micrococci is 0.0025, or one part in 40,000. * * * The quantity required to prevent their development in a man weighing 160 pounds would be 3½ grains."

A full dose ofthe agent is from ¼ to $^1/_{12}$ of a grain. "In iodoform we have an agent which permits the introduction of iodine into the system in larger doses than is tolerated when the agent is given uncombined in the form of tincture or in solution with potassium iodide. And we have evidence that this substance is not eliminated so readily as the potassium salt, and that it is decomposed within the body; still it does not seem practicable to administer it in sufficient quantities to take advantage of the germicide power of iodine for the destruction of pathogenic bacteria in the blood and tissues.

"Bacteric organisms failed to multiply after being exposed to a one per cent. solution of carbolic acid. * * * The experimental data recorded do not favor the idea that in this agent we have a cure for all germ diseases. The quantity which should be present in the blood of our standard adult, to accomplish the desired purpose would be considerably above an ounce of pure acid."

Dr. Sternberg, despite his proof that the quantity of an antiseptic possible to be taken by a patient without destroying life, is insufficient to even prevent germ accumulation adopts the germ theory and germicide treatment of disease, and Dr. Wier, who believes carbolic acid the "safest" agent for the destruction of the bacteria, and deems a five per cent. solution necessary for that purpose, declares the germ theory *settled*.

There is so much averse to its settlement that it seems to us many distinguished investigators have placed themselves rather in the position of advocates than scientists. We would call the attention of the society to the many cases of poisoning reported in the journals by iodoform and other germicides, and recommend the members to avoid putting the theory to a practical test with their patients. Physicians may adopt it while it is the fashion, but we cannot avoid the prognosis that the fashion will change. Bacteria are found in the body under all circumstances, and with favorable conditions of food, moisture and warmth, like all other living organisms, they multiply. They may be carriers of the disease ferment with which they are covered and on which they feed, and thus communicate disease. They carry it as does the unwashed doctor who goes from his septicæmic patient to the lying-in room, and are proved its cause much as we would prove the doctor the cause of puerperal fever by purifying him with a half scruple dose of mercuric bichloride or five ounces of pure carbolic acid, thus saving his patron from disease and death.

The physician of the future will learn to distinguish between the carrier and the cause of disease as well as between the germicide and antiseptic action of medicines.

BI-CHLORIDE OF MERCURY IN DIPHTHERIA.

BY MADISON REECE, M.D., ABINGDON, ILL.

During the past two and a half years I have used, exclusively, in the treatment of diphtheria, the bichloride of mercury in large and frequent doses. My attention was called to its use by reading the address of Dr. Wm. Pepper, chairman of the Section of Practical Medicine, before the American Medical Association for the year 1881. The statements therein made interested me to such an extent that, having on hand two cases of this disease of a malignant form, I determined to try its efficacy.

Up to this time I had found (as who has not?) true diphtheria one of the most fatal forms of disease that could be encountered. I had used the usual remedies, so far as I could observe without any effect upon the progress of the disease, and had arrived at the conclusion that in the worst forms of the disease the patient would die with or without treatment, but since adopting the method of treatment to be described, I have not felt the same anxiety as formerly, when called to a case.

To this date thirty-five cases have been treated in this way, with three deaths. Two of these deaths were the first cases referred to above, and although they ended fatally, I was thoroughly convinced that the remedy had special power to combat the disease, and I now believe that with my present experience in the use of this remedy, I could have saved one, if not both of these patients.

My method of preparing this medicine is to dissolve one grain of the bi-chloride in four ounces of rain-water; then, if the patient is old enough to gargle and rinse the throat and mouth, he is to do so every two hours, and immediately afterwards to take a teaspoonful internally. If the disease be of a severe form, it should be administered in this way every hour. The above dose is calculated for a child of five years of age. I have often used the same amount for a child of two years of age.

It will be observed within fifteen or twenty hours that the exudations on the tonsils and palate will begin to fade away and in a few hours more rapidly disappear. If then, unfortunately, as I found by experience in my early use of the remedy, the medicine be discontinued, the exudation will rapidly reappear, to be again dispersed by a return to the treatment, so that it is necessary to continue for a week, or even a longer time, the use of the medicine, not in such large and frequent doses, for it is observed that as soon as the patient shows signs of becoming bet-

ter, the effects of the bi-chloride are shown by nausea, or vomiting, or purging. But so long as the system seems to be laboring under the diphtheritic poison, these effects are not manifested.

I shall not attempt to give the *rationale* of the action of this medicine, but will only call attention to the fact that it belongs to that class of remedies which is rich in chlorine, and to which physicians have resorted for many years in the treatment of this affection, such as the tr. of the chloride of iron, chlorine water, chlorate of potassium, and here the bi-chloride of mercury. Also in view of the strong germicidal qualities of this substance, as recently demonstrated by Dr. Sternberg, we may reasonably suppose it has a destructive effect on the bacteria that swarm in the exudation in the throat and surrounding structures.

To show that this remedy in diphtheria seems to be appreciated abroad, I quote from Dr. Sternberg's article in the April number of the *American Journal of the Medical Sciences*, page 337: "A medical friend who has just returned from Vienna informs me that mercuric bi-chloride is at present the favorite remedy in that city for diphtheria."

My friends and neighbors, Dr. H. Judd, of Galesburg, and Dr. W. G. Piersol, of Hermon, have used this remedy in their practice with the most satisfactory results.

In conclusion, I would request those who may make a trial of this treatment to communicate the result to the JOURNAL, or if not wishing to do so, to the writer.

AN OCULAR POLYPUS.

BY S. POLLAK, M.D., OF ST. LOUIS.

A lady of 74 years presented herself with a "bleeding eye." Blood was oozing from beneath the upper lid constantly when the lids were open. The eye was perfectly sound, vision good, except when obscured by the blood. The upper lid was somewhat conical, and of a light bluish tint. On everting it, the conjunctiva was found perfectly smooth, but on pressure, directly on the superior orbital margin, a racemous, painless tumor was extruded from the sulcus, of the size, shape, and color of a Lawton blackberry, which was bleeding profusely on the lightest touch. It was very brittle and friable, and could have been crushed with ease. It was difficult to determine the nature of it. Was it benign or malignant? Was it an angiectasia, an erectile tumor, or a polypus? I am inclined to think it was the last. Though a very confined space for a polyp to emanate from and to grow, yet the mucous membrane everywhere is the habitat of polypi, and the upper sulcus of the eye is well adapted for its origin, although not for its development. It had to be removed at once, and it was promptly effected. With a curette the edges of the tumor were raised; they were found flattened against the conjunctiva, but not attached to it. A pedicle of about a centimeter was reached and readily twisted off with the forceps. Bleeding stopped at once. The levator palpebra superior being freed from the impediment of the tumor, resumed its function. The result was entirely satisfactory. No recurrence of bleeding. The wound was nearly cicatrized the next day. This polypoid tumor is carefully preserved, and will be accurately examined with the microscope.

MEDICAL PROGRESS.

MIDWIFERY AND GYNÆCOLOGY.

A FRAGMENT OF A CANDLESTICK IN THE UTERUS.—Dr. E. Hjerstrom reports the case of a working-woman 49 years of age who had been subject to periodical attacks of mania since puberty, with lucid intervals. Although single she is the mother of three children; was under treatment for an abundant and fœtid vaginal discharge. Examination of the uterus showed a neck covered with granulations, and irritated by a secretion which came from the uterine cavity; exploration of the uterus with a sound disclosed the presence of a metallic body. The patient would not admit that a foreign body had been introduced into the womb. After dilatation of the cervix, a piece of brass was extracted which had lodged in the superior portion of the uterine cavity. It proved to be a bobéche or socket, the tube of which measured cm.015 in length, and 2 centimeters in diameter, and of which the flange reached 4 centimeters in diameter. The patient did not know how the bobéche got there. Her menses had ceased for five years; her last confinement was twelve years previous; she never had any symptoms of parametritis, but had suffered from uterine colic particularly of late. Possibly the piece was detached from a candlestick introduced into the vagina through eroticism, and seized and retained by the uterus during the mechanical excitement.—*Hygeia Rome Medicale, Paris Medicale.*

CURE OF A SEVERE CASE OF HYSTERIA BY CASTRATION.—Dr. Bernh. Heilbrun (*Centralblatt für Gynäkologié*, Sept. 22) gives us the details of a case of hysteria in a girl 24 years of age, who was bedridden for seven years, suffering from excessive vomiting and cramps in the stomach to that extent as to lead to the diagnosis of ulcer of that organ; these symptoms were relieved sufficiently during her illness to allow of the retention simply of eggs and of milk. Contractions of all of the muscles of the body gradually developed themselves, commencing with the left lower extremity, the slightest movements causing severe muscular cramps. The ovaries were removed and found to be very different in size, the right 1 cm long, ¾ cm. broad, ½ cm. thick, irregularly shaped and of firm consistency; the left 3½ cm. long, 1½ cm. broad, 1 cm. thick, the surface uneven, tuberculated, and filled with a number of cysts the size of a pea. A fresh corpus luteum was noted.

The abdominal wound healed by the first intention. On the 12th day the patient left her bed; four weeks after the operation she could walk alone, and eight days later returned to her home; three months later the menses appeared without pain, but never returned. She now, ten months after the operation, walks from her home to her physician, a distance of 1½ leagues.

HYPODERMIC INJECTIONS OF ERGOTININE IN POST-PARTUM UTERINE HÆMORRHAGE.—Dr. C. Chahbazian (*Archives de Tocologie*) recommends this treatment for the following reasons:

1st. Ergotinine, alkaloid of the ergot of rye, can be employed with success in subcutaneous injections to arrest post-partum uterine hæmorrhage.

2nd. The hypodermic injections of ergotinine are indicated whenever a post-partum uterine hæmorrhage results from feeble uterine contraction, or uterine relaxation after a short contraction.

3rd. In the case of post-partum hæmorrhages arising from rupture of the uterus, tearing of the neck of the vagina, from hæmorrhoids or from cliteroid hæmorrhage, ergotinine has no effect.

4th. Five drops of the solution of ergotinine (of the preparation used by Dr. C. Chahbazian and made by Tanret) is sufficient to arrest hæmorrhage. The dose can be repeated if necessary, but not more than to the amount of fifteen drops; generally small doses of ergotinine act better than large in arresting post-partum hæmorrhage.

5th. The advantages of ergotinine over ergotine are: (*a*) More prompt action, which is surer and more constant over the uterus; (*b*) Absence of any local disturbance, as induration, abscess or gangrene; (*c*) Necessity for but a small dose to obtain a good result.

6th. Ergotinine may be employed successfully against secondary uterine hæmorrhages, and as a prophylaxis against post-partum hæmorrhages.

SCROTAL PRESENTATION DURING LABOR.—Dr. A. Prengmeber (*Alger Medical*) describes a case where the presenting part at the vulva was a tumor of the size of the fist, black as jet, bloody, and yielding to palpation. His first idea was of a fibrous tumor or a polypoid attached to the orifice of or within the neck of the uterus, pushed down by the presenting part and pressed against the pubis. In his mind was the feasibility of dividing the pedicle of the tumor by means of a bistoury or by a ligature, but, fortunately, by a further examination he reached the buttock and the anus, and found he had to deal with the scrotum. Delivery was readily effected, the discoloration soon disappeared, and the scrotum returned to its normal size.

ON THE REMOVAL OF THE PLACENTA.—Prof. Dohm (*Deutsche Med. Wochenschrift*) gives the results of his observations in the Königsberg Hospital, especially with regard to Credé's method, as follows:

1. In 1,000 cases of labor where the removal of the placenta was left to nature, the results were far better than in 1,000 other cases where Credé's method was employed.

2. The 1,000 cases of labor where the placenta was discharged spontaneously had markedly less hæmorrhage, retention of membranes and puerperal fever. Those that were treated according to Credé's method suffered to a considerable extent from troubles with the membranes, and in consequence there were many fatal puerperal affections.

3. Those cases where the placenta was removed in the first five minutes after birth by the Credé method, were the most liable to these affections. Those that were left longer before such extraction was attempted did better, but still remained considerably in excess of those where this was left to natnre.

MEDICINE.

THE USE OF ANTIMONY IN CERTAIN SKIN DISEASES.—Mr. Malcolm Morris, F.R.C.S.ED., Surgeon to the Skin Department of St. Mary's Hospital, writes:

Considering the close chemical affinity of the three important drugs—phosporus, arsenic and antimony—it is somewhat surprising that little use should be made of the last in the treatment of diseases of the skin. Of the three, arsenic is the one which has gained the greatest notoriety. It has passed alternately through the phases of great popularity—being considered by some a specific for every form of skin affection—and of equally undeserved disrepute. Now, however, we are forming a more rational estimate of its value; and, while acknowledging its utility in a few certain well-defined conditions, I have thought it might prove useful to bring before this Section some of the results observed during the administration of its near ally.

A certain share of attention has also been paid to phosphorus, but antimony has hardly been noticed. The probable reason for this is that antimony has been looked upon as a drug to be avoided on account of the dangerous symptoms produced by even apparently moderate doses. But the same argument that applies to arsenic, and strychnia and other drugs, applies with equal force to antimony—that the action depends entirely on the dose employed. We find in text-books that it has two actions—in the smaller pharmacopœial dose depressant or antiphlogistic, in the larger dose emetic. But no mention is made of its alternative action in repeated small doses. The sulphide, in combination with mercury and guaiacum, is the only preparation which has been used for this purpose.

Tartar emetic, or tartarated antimony, is the preparation I have used in these investigations the largest dose being $^1/_{32}$ of a grain, or seven and one-half minims of the vinum, only half of the mininum dose of the *British Pharmacopœia*. I must mention that in all cases in which the effect of the drug has been watched little or no local treatment has been used.

I will state now, in as concise a manner as possible, some of the more important diseases in which I have used the drug, leaving a more complete and detailed account for another opportunity.

Eczema.—It is now several years since my colleague, Dr. Cheadle, pointed out to me the value of antimony in the treatment of the acute form of this disease. In the majority of the cases which have come under my care, its beneficial effect has has been both marked and rapid. In the acute general eczema of adults, which usually commences somewhat suddenly by heat and burning on the flexor surfaces, and on the other characteristic positions, and is soon followed by abundant exudation of clear fluid, and in the form known as eczema rubrum, I generally begin

with four or five minims of the vinum antimoniale three time a day, increasing the dose gradually up to seven minims. After a few doses the exudation ceases, and the local irritation is much relieved; but, in order to prevent a relapse, it is necessary to continue the treatment until all traces of the eruption have disappeared. In actute eczema of children, the dose should be in proportion to the age of the child—half a minim or less up to six months, and one minim or less up to a year. As a rule, I have found both children and adults bear these quantities well, neither sickness or diarrhœa being produced. In the case of aged persons, however, the dose should not exceed three or four minims to begin with, as diarrhœa may result from the administration of a greater amount.

In the subacute forms, both of children and adults, similar doses, but continued for a longer period, are necessary. In chronic eczema, especially when localized, the use of antimony is less often successful; but even in this troublesome form, it relieves the acute exacerbations, and is occasionally followed by cure when other methods of treatment have failed.

In eczema impetiginodes of children, I have noticed little benefit from the drug till the scabs have been removed, and formation of pus checked by local treatment. Simple impetigo contagiosa from a local cause is not included in this category.

In the various forms of so-called lichen that occur in children, I have found antimony in the previously mentioned doses of the greatest value in relieving the irritation—a feature in which it resembles arsenic.

Erythema.—In most of the cases of erythema met with in practice, the eruption disappears without any special treatment; occasionally, however, when the disease is continued by fresh outbursts, antimony is of great service in modifying the course and relieving the burning and heat. There is a condition which is not clearly described either in special books on the skin or in those on general medicine, that I have found to be greatly benefited by antimony, whereas it is aggravated by arsenic. The attack usually commences suddenly, with heat and burning of the skin of the face, which is followed very rapidly by great swelling that often involves the eyelids. The smarting is severe, and pain is experienced when the part is touched. Occasionally vesicles or bullæ are formed on the swollen and inflamed skin. The patient feels ill, but there is no special rise of temperature. The disease usually runs its course in from three or four to ten or even twenty days. The chief feature of the disease is that it is almost certain to relapse. By some authorities this is considered to be idiopathic erysipelas—the public always call it so; by others it is looked upon as a peculiar form of eczema, and said to be associated with gout. I have seen several cases, and am inclined to think it may be called relapsing erythema, as it has none of the dangerous qualities of genuine erysipelas. Antimony acts in this disease as in acute eczema, by shortening the attack and diminishing the severity of the symptoms. It should be continued for a considerable time after recovery, to prevent, if possible, a relapse.

Prurigo.—In this troublesome affection, frequently met with in our out-patient rooms—the relation of which to the severe form known on the Continent as Hebra's prurigo, Mr. Morrant Baker pointed out at the International Congress of 1881—antimony is of great use. Three or four minims of the vinum, continued over a long period, allays the itching ro a large extent, and ofteu prevents the relapses of eczema. In several cases, after arsenic, iron, iodide of iron, cod liver oil, and numberless other tonics had been tried, antimony was the only drug that produced any benefit whatever. When given in the before mentioned doses continuously for more than a year, I have never seen sickness, diarrhœa, sweating, or debility; but, on the contrary, the appetite improves and the weight increases. I have not had the opportunity of trying the remedy in a patient older than 18½ years, suffering from this disease; but in one particular case of that age the benefit was most marked while the drug was being taken.

Sycosis.—I have given antimony in five well-marked cases of this disease; in four, it did not seem to produce any effect, either beneficial or otherwise; in the fifth, there was considerable improvement after the vinum had been taken a fortnight in seven-minim doses. It seemed to relieve the pain and burning; but, although the remedy was persevered with for over three months, the improvemeut was only temporary. The local treatment while the drug was being administered was olive-oil or vaseline. In none of these cases was there any bad effect; no depression, diarrhœa, sickness, or sweating.

Urticaria.—In a few cases of chronic urticaria, I have found antimony, like arsenic, of service in checking attacks, so long as the remedy was continued.

Psoriasis.—Though, in the majority of cases of psoriasis, arsenic is to be preferred to antimony, have elsewhere called attention to the fact that, in certain persons, arsenic not only fails to relieve, but even aggravates the disease. I have in some of these cases, tried antimony, and have noticed that in a few instances improvement took place, while in others it seemed to have no effect.

I have been obliged to condense the facts in this paper into very brief space, but two points I wish especially to lay stress on; first, that tartar emetic—in doses of $\frac{1}{240}$ to $\frac{1}{32}$ of a grain, according to age—can not only be tolerated, but seems to have a decided tonic action; secondly, that it proves useful in those acute forms of skin disease that are usually aggravated by arsenic.—*British Medical Journal.*

Painting with Tincture of Iodine in Variola.—In 1881, a patient entered the hospital of Konotop suffering from lumbar pains, and other symptoms indicative of the onset of variola. To satisfy the patient, Dr. Vetroff painted all of the lumbar region with tincture of iodine. The next day, this region was entirely covered by a variolous eruption, while only two vesicles were found on the rest of the body. The progress of the disease was very benign.

Having observed this curious case, Dr. Bojinski-Bojko (*Vratch*, No. 1, 1883), during the development

of an epidemic of variola in his district, commenced to paint with the tincture of iodine the anterior surface of the thighs of all the patients who presented the precursory symptoms of that disease. In the four cases so treated, the eruption confined itself strictly to the painted limits, and the prognosis was very favorable. Attempts failed to substitute sinapisms for the tincture of iodine.—*La France Mèdicale.*

ANATOMY AND PHYSIOLOGY.

INJECTIONS INTO THE OPTIC NERVE.—Pfluger (Soc. d'Ophth. d'Heidelberg) had injected in dogs two or three drops of a saturated solution of fluorescine, directing it toward the center, partly in the trunk of the nerve under the arachnoid, and partly into the sheath under the dura mater. In about two minutes, both eyes showed a fluorescence of the retina, which persisted for five weeks. This effect cannot be produced by introducing the fluid directly; it cannot be made to pass through the circulation, and requires at least 8 grammes to produce the result. A small quantity injected into the orbital cellular tissue gave no result. This proves that there is a direct communication between the two retinæ by the course of the optic nerve and of the chiasm, a fact confirmed by the experiments of Knies and Horner, who have in the same manner injected Prussian blue in cadavers, obtaining a coloration of the optic nerves of both eyes.—*La France Mèdicale.*

PANIFICATION.—In a carefully written article, which details the changes undergone during the fermentation in the process of bread-making, Mr. M. G. Chicandard (*Moniteur Scientifique*) arrives at the following remarkable conclusions:

1st. Bread fermentation does not consist in a hydration of starch followed by alcoholic fermentation.

2nd. It is not determined by a saccharomyces.

3rd. The fermentable matter is the gluten.

The gluten is rendered soluble by the secretion of a zymase from a microbe; then the hydrate produces a peptone. The microbe assimilates the peptone, and furnishes a number of the products of excretion—carbonic acid, hydrogen, azote, alcohol, acetic acid, butyric acid, lactic acid, leucine, tyrosine, and phenol.

4th. The crude starch is not modified either by the microbe or its zymase; the preparation simply forms from the soluble starch, the erythro-dextrines, and the achroo-dextrines, these dextrines being found especially in the most heated portions.

5th. The agent of bread fermentation exists normally in the grain of wheat, under the form of a mobile spherobacteria, the *microzyma glutinis*. It develops into the *bacillus glutinis*, which is accelerated by the soluble albuminoid matters contained in bakers' yeast.

6th. Bread fermentation, as described, is produced whenever leaven or yeast is added to flour and water. Any other addition may produce a secondary fermentation, explained by the first, but in the mixture produced we can always find those referred to as belonging to normal fermentation.

PHYSIOLOGICAL ACTION OF IODOFORM.—Dr. Gaetano Rummo (Archives de Physiologie) has just completed (October) the second of a series of experimental researches upon this subject in Vulpian's laboratory for experimental and comparative pathology. He finds:

1st. The mortal dose of iodoform is: For frogs, 2 centigrammes; for guinea pigs, by the stomach or peritoneal injection in from 2 to 3 days, 1 grm. .50, to 2 grammes; for rabbits weighing 2.100 to 2.300 grammes, 2 grm. .50 to 2 grm. 75 in 2 or 3 days; for dogs of the weight of 10 kilogrammes, 4 grammes in 2 or 3 days.

2nd. In frogs, the contractions of the ventricles of the heart diminish in number, and tend to an arrest in diastole. The systole increases in energy, is regular and ample. These heart movements always precede other functional troubles. The tracings indicate an increase in length of the ventricular systole, and a degree of persistence in the diastolic contraction that is suggestive of veratrine. Atropine does not modify the slowing of the heart. When under the full force of this influence, if the heart be removed from the body, it resumes its frequent pulsations, without reaching the number of pulsations as in the normal state. Iodoform has no action on the heart of the frog when the medulla has been destroyed. In the beginning of the absorption of iodoform, it produces a dilatation of the interdigital membrane, to which succeeds a progressive contraction. In small doses the action of the heart is modified, but the movements remain nearly normal. In large doses there is first an acceleration, then a retardation, and finally an arrest of respiration. In the mammalia there is also a diminution of the cardiac pulsations. In the dog 0 grm. .30, or 1 gramme, produces a retardation of the movements of the heart, and a slight increase in arterial tension, without diminution of energy, and without irregularities of the ventricular contractions. With 2 grammes, 4 grammes, and more, there comes a progressive diminution in the number of pulsations of the heart, with a lowering of the intra-carotid pressure of about 10 centimeters of mercury. In about four to five hours a gradual return of the tension to its normal state is noted, a return which is followed by an increase of the pressure. In large doses, after retardation of the cardiac pulsations, there is acceleration and irregularity. And the augmentation and irregularity of the respiratory movements, the periods of acceleration and retardation of the cardiac pulsations, the elevation and lowering of pressure, correspond to convulsive movements. These phenomena are not all noticed after division of the pneumogastrics.

3rd. In the dog, doses of 1 gramme to 1 grm. .50 do not influence thermogenesis. Doses of 2 to 3 grammes raise the temperature 1° to 1.5°. Doses of 4 to 5 grammes lower the temperature 4° to 5°.

4th. Iodoform acts directly upon the nervous centers, and secondarily upon the nerve trunks and upon the muscles. In the first period it exercises a depressing influence upon the anatomical elements of the nerve centers. At first it produces a diminution, which soon becomes complete, of voluntary motion.

At the same time there is a slight amount of anæthesia, and a diminution of reflex action. Later it produces an enfeeblement of the excitability of the nerves and of muscular contractility. In the second period it exaggerates, like a physical excitant, the irritability of the nervous centers, and produces contractions and tonic convulsions.

5th. In the dog, doses of 1 gramme to 1 grm. .50 produce no appreciable gastro-intestinal disturbance. The doses of 2 to 3 grammes cause indigestion, and those of 4 to 5 grammes produce vomiting, disgust for food, diarrhœic and dysenteric stools.

6th. Iodoform, from the commencement of its action, increases the secretions, particularly the salivary, biliary, and gastro-intestinal.

7th. Iodoform, in the state of an alkaline salt (sodium iodide ?), is eliminated by all the secretions. It is eliminated in small quantity, without being decomposed, by the respiratory tract. It passes out of the urine in small quantity, in the state of an iodate. The large doses of iodoform produce albuminuria and hæmaturia; they also arrest the elimination of iodine. Iodoform commences to be eliminated as iodine one hour after its ingestion into the stomach. It is promptly eliminated, and can be recognized in the urine three days after being taken into the stomach.

8th. The most important alterations produced by iodoform are, fatty degeneration of all the organs, particularly of the liver; glomerulo-nephritis, and acute anterior polyomyelitis.

9th. Iodoform is more active in preventing the development of bacteria germs than in arresting the pullulation of bacteria. Sodium iodate and iodoform dissolved in oil of turpentine kill the microbes in full proliferation.

VESSEL INSPECTION.

COPY OF AN OFFICIAL REPORT MADE TO THE SURGEON-GENERAL OF MARINE HOSPITAL SERVICE, BY JOHN B. OLIVER, M.D., SANITARY INSPECTOR OF THE MARINE HOSPITAL SERVICE AT LIVERPOOL, ENG.

1. "Sanitary history of vessel."

In steamships making short passages or voyages, no difficulty arises as to information, but in some sailing ships, from changes in captain and crew, it is difficult to gain knowledge as to sanitary history of last cargo, crew and vessel.

2. "Sanitary condition of vessel (before and after reception of cargo, with note of decayed wood). Note disinfections of vessel." To note condition of vessel before reception of cargo, it would require a person or persons constantly at the docks to board vessels prior to reception of cargo and then report to Sanitary Inspector. With regard to disinfection of vessel, the reports given are always vague. I find in a case of infectious disease occurring, that only berth or cabins are disinfected or stored, and not the whole apartment. You will please note in my report on various Bills of Health issued under head of "Note disinfection of vessel," my remark, disinfectant used, meaning that carbolic acid, etc., has been used by sprinkling, washing or scrubbing. Not that the vessel itself has been disinfected with sulphur or chlorine.

3. "Sanitary condition of cargo."

There is always disinclination to give full particulars of cargo, unless an abstract of bill of lading is asked for. They prefer giving the vague terms of "general." The cargoes carried to the United States during our inspection have, as a rule, been good, excepting a cargo or two of rags from Alexandria and Smyrna. I am informed that a quantity of rags from both places are still stored up at Liverpool, waiting only for shipment.

4. "Sanitary condition of crew."

In steamships coming to the States, all the crew were seen and reported upon. But in sailing ships which clear in the docks it is impossible to see all, as the greater portion of the crew jump on board only when the vessel is leaving the dock gates.

5. "Sanitary condition of passengers.

Only steerage passengers are seen. No doubt it frequently happens that when seen apparently well, some few have already the germ of disease undeveloped, and are taken ill on the passage. Of course if they are noticed they are immediately sent on shore.

6. "Sanitary condition of clothing, food, water, air-space and ventilation."

On the whole, clothing, food and water, good. As regards air space and ventilation in the forecastles for seamen and firemen in steamships, it is good in some, fair only in others, and in the remainder positively unhealthy. The steerage apartments for passengers are, as a rule, spacious and well-ventilated. Some few are cramped and not sufficiently ventilated, and when crowded with passengers, this condition must be felt. Fortunately, the passage is short. In a few instances the hospitals are in the steerage themselves and not too well ventilated. Others are in their proper places, *i. e.*, on deck and amidship. In the remainder the hospitals are forward and near urinals and water-closets. In sailing vessels the forecastles are mostly good and convenient.

I cannot omit mentioning the unsanitary condition of the water-closets in sailing ships and some steamers. On inspection they are found heaped up with excrement. As a rule the steamers have, or ought to have them flushed and a stream of water constantly running through them. Whenever this blockage was observed, the bill of health was refused until the closets were cleared out and disinfected. The explanations given by officers on board ships for this state of matters was, "that men who worked on board ship when loading and coaling caused it;" things, they say, are different when at sea. But there must be negligence somewhere. During the latter part of our inspection marked improvement in this respect was noticeable.

Referring to vessels employed in cattle trade I cannot but think the wooden structure constantly used, must in time get saturated with filth and germs of putrefactive disease, especially in times of "foot and mouth disease," spite of the reported washings with carbolic acid and lime. A light and reasonable

iron structure would be better. This could be removed and well washed after each passage and the decks more thoroughly cleansed.

I am informed considerable amount of diarrhœa occurs among passengers coming to the United States, particulary children, and when approaching and in the Gulf Stream. Judging from the large amount of unripe fruit I sometimes see in the children's hands during inspections, may this not be the exciting cause?

If found necessary at any future time to appoint inspections, I would suggest that no vessel be allowed to enter any port of United States without a bill of health from sanitary inspectors, and not make it optional, as heretofore. Such a rule would greatly facilitate inspections.

In conclusion, I hope the work has met with approval. I am certain the inspection has been beneficial.

JOHN B. OLIVER, M. D.,
Sanitary Inspector.

To Surgeon-General JNO. B. HAMITON, U. S. Marine Hospital Service.

A DAILY medical journal has just been started in Paris.

THE remains of Wm. Harvey were removed Oct. 18, from the vault under Hempstead Church and placed in Harvey Chapel in a sarcophagus provided by the Royal College of Physicians.

AT the solicitation of numerous friends, Messrs. Cole & Son (London), the well known microscopists and editors of "Studies in Microscopical Science," have undertaken to make a series of preparations, which shall serve for the perfect illustration of the text of Dr. Klein's "Manual of Histology.—*Medical Press.*

Dr. HERRMANN ZEISEL, Extraordinary Professor in the University of Vienna, has recently had a patent of nobility conferred upon him, Van Zeisel, whose name is a familiar word everywhere in the domain of medical literature, on account of his *Lehrbich der Syphilis* (a fourth edition of which appeared last year), was already distinguished by the title of Regiemngsrath.—*Medical Press.*

DISSECTION IN LONDON.—The *Medical Times and Gazette* says: "The session has commenced in real earnest in the metropolitan dissecting rooms, as the subjoined statement of the number of bodies being dissected shows: Taking them in numerical order, at St. Bartholomew's 27, at Guy's 19, at University College 18, at the London Hospital 17, at St. George's Hospital 8, at King's College 7, at the Middlesex 6, and at Charing Cross Hospital 4 bodies were placed on the table on October 1. The mode of preparing the bodies at University College Hospital is as follows: The bodies are injected with a solution of one pound of crystallized carbolic acid in half a gallon of glycerine and half a gallon of spirit. Each body is then sewn up in calico and put in a tank, and a solution consisting of glycerine one quart, water and spirit half a gallon each, and common carbolic acid half a pint, poured over it.

THE
Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, NOVEMBER 24, 1883.

THE BRITISH MEDICAL ASSOCIATION AND ITS JOURNAL.—It will be remembered that previous to the last annual meeting of the American Medical Association some letters from England appeared in American journals, commenting unfavorably on the management of the *British Medical Journal*, and well calculated to discourage the then contemplated publication of a journal bearing a similar relation to the national organization in this country. Since the last annual meeting of the British Association in August last some unfavorable criticisms have again found their way into American journals regarding the same subject. Some of these criticisms have reached England and attracted the attention of a correspondent there, who sends us the following interesting comments:

"I see in a letter written to one of the American medical papers by Dr. Fothergill, statements made as to recent procedings at the annual meeting of the British Medical Association at Liverpool which are apparently intended to influence the future conduct and relations of the American Medical Association and its journal. It is well that it should be known that the statements are purely imaginative, and are apparently colored by Dr. Fothergill's desire to cover his retreat from the absurd position which he took up in his former communications. The only changes made at the last annual meeting was a change by which an intermediate and obsolete body called the Medical Council, which met only once a year, was abolished, and what was previously called the Committee of Council became the Council. To carry out this desirable arrangement the constitution of the

Council itself was slightly altered, and whereas formerly three-fourths of the elected members of the council were elected by the branches, and one-fourth by the Council, which was itself an intermediate body elected by the branches, now the whole of the elected members are elected directly from the branches. This change is of the very slightest character, in no way affects the constitution of the Committee of Council and very slightly adds to its numbers. All the previous arrangements for permanent members, past presidents, vice-presidents, treasurer, and chairman of council remain unaltered, the only change being that of giving the president of the year of the association a seat at all the committees. These amendments were proposed by the Committee of Council itself and were accepted unaltered after some rather noisy discussion by a few persons and unanimously confirmed at a special general meeting called for the purpose. No changes whatever were introduced by the general meeting into the programme proposed by the Medical Council. The position of the editor remains unaltered, and is the same as it has been for years, except that while the by-laws were undergoing the revision necessary for the purpose above stated, the clause relating to the editor was more fully expressed so as more clearly to state the actual existing relation.

"Dr. Fothergill had for the last two years put upon the notice paper, a notice of motion that the term of office of the Editor should be absolutely limited to ten years. The proposition, absurd in itself, he ultimately withdrew without taking a vote on it, conscious it would have had no chance of success. The senior and permanent members of Council, whom he politely terms "barnacles," retain precisely the same position and precisely the same influence as they always have had. Some attempt was made to alter their term of office, but it was rejected by the most decisive majority, so that the Augean stable, as he courteously denominates the Committee of Council, was certainly not cleansed of its 'barnacles,' as he, by his elegant figures of speech, seems to labor to induce his trans-Atlantic readers erroneously to suppose.

"The Association is in a high state of prosperous activity, and its journal now numbers 11,500 subscribers."

American Public Health Association.—An abstract of the proceedings of this body at its recent meeting in Detroit, and some of the papers read, will be given in the next number of the Journal.

Notice.—Some delay has occurred in sending the back numbers of the Journal to a considerable number of those whose names have been only recently forwarded to us by the Treasurer of the Association. This resulted from an insufficient supply of the first number issued. The deficiency, however, has been made good, and we now have an ample supply of that number for future use.

A few members and subscribers received for a time duplicate numbers of the Journal. If any such have still their duplicate copy of No. 7, they would confer a favor by returning it to this office.

American Climatological Association.—A few weeks since in noticing the formation of this new organization, we copied the list of officers, etc., from a New York medical journal. Among the names was that of "W. H. Geddings, M.D., of Arkansas." We knew that one well-known Dr. W. H. Geddings had been a resident of Aiken, S. C., for many years past, but thought it possible that another of the same name might be a resident of Arkansas.

We have since learned that the Arkansas was a mistake, and should have been *Aiken, S. C.*, in the original reports.

SOCIETY PROCEEDINGS.

AN ABSTRACT OF A CASE OF OBSTINATE "SCIATICA," WITH THE TREATMENT, INCLUDING NERVE-STRETCHING, AND RECOVERY.

BY DR. GEORGE J. SINTZEL, OF LONG GROVE, ILL.

During the early part of the month of July of the present year, I was called to see Miss E. S., æt 28; native of Germany; occupation, a domestic, and the daughter of a well-to-do farmer, who had been suffering for some weeks from a severe pain in the right hip. From her I elicited the following history: That she menstruated regularly; that her previous life had been healthy, except in July, 1882, when she contracted malaria that lasted two months; that after her recovery from this malady, she continued to be in good health until last April, when she began feeling pain in various joints, changing from one to another, as in rheumatism. She stated, however, that she thought her present trouble was the result of her being "barefoot" in the cellar whilst churning, because she experienced acute pain in a few hours later about the right thigh and hip. On examination, I found no swelling, but there was marked tenderness in the right hip joint, which extended posteriorly down the thigh. The pulse and temperature were normal. Judging from the history of her having had previously pains of a rheumatic character, I prescribed salicylic acid in solution, alternated with iod. pot., morphia and vin. colch. sem., and applied a good-

sized cantharides plaster to the surface over the joint, as I would for an ordinary case of rheumatism. I left her with the expectation of finding her much relieved at my visit next day.

Upon seeing her again, I was quite surprised to find her as she had been the day previously, and complaining of greater pain. I thought possibly the irritated surface in this region from the blister annoyed her, with, perhaps, some other effects that it might produce upon the system, notably the kidneys, which led me to examine the urine, and I did not give as much attention to the pain (the real seat of the trouble) as I otherwise would think of doing. Upon examining this secretion, I found it quite red in color, and normal in every other respect, and as there was no fever present, I considered my case "*in statu quo.*" I then told the attendant to re-apply the "fly blister" toward evening, and continue the other remedies. The third day, when visiting her, I was informed that her pain had assumed a different character, that it had become jerking and lancinating, and extended from the hip down the posterior portion of the thigh, and it would shoot out at the external malleolus; it also had become paroxysmal, and was accompanied with rigors and great hyperæsthesia of the limb. Upon questioning her closely regarding any specific taint, and the characteristic symptoms of locomotor ataxia, I found that none of these were present, and I diagnosed the case to be one of sciatic neuralgia, or a typical case of "sciatica," and told the parents of my conclusion. Considering that she had been affected with malaria the year before, and with the present symptoms of "chills," I gave her 5 gr. doses of quinine, with ¼ gr. of morphine every two hours, and again resorted to the application of a fly blister along the course of the nerve.

The next morning she was somewhat relieved. I then increased the quinine to ten grains, given with the same quantity of morphine every three hours. In the evening of the same day, however, a messenger summoned me quickly to the patient, who was raving with pain—her screams could be heard at a neighbor's house a quarter of a mile distant. Upon my arrival I injected (hypodermically) one-fifth grain of morphine, inserting the point of the syringe over the course of the nerve, and plunging it deeply in the tissues. She very soon experiencd relief, which lasted only fifteen minutes, I then waited half an hour and injected one-sixth grain of morphine, and this quantity was repeated successively every thirty minutes until the operation had been performed four times, when this procedure was withdrawn. For the succeeding five days she continued taking the quinine and anodynes, until the former remedy was increased to a drachm a day with no preceptible change or relief. As the disease progressed, the symptoms became more distinctively marked. The darting pain became more perceptibly of a lancinating and paroxysmal character, and was especially of a severe form at night, and varied in its exacerbation from one to twelve hours, when it would gradually subside to a milder form, but at no time was she completely free from acute pain. Her nocturnal suffering would sometimes be ameliorated by the hypodermic use of morphia and atropia, and hot fomentations. The further treatment in the meanwhile consisted in giving her freely all the different hypnotics at command, including chloral hydrat, belladonna and aconite, and in combination with these agents we used a small electric battery to its fullest extent. This treatment was continued for ten days, and during a portion of the time we had hopes of its efficacy in that the relief would be permanent, but there was always a tendency to an increase of the trouble after a few hours or a day. As the field of remedies used in this troublesome affection are large to select from, I determined to pursue another course, and gave her phosphorus and the various chalybiate preparations with arsenious acid and nux vomica.

The battery was also used in connection with this treatment. This with proper nourishment and the constant use of anodynes, was continued for two weeks longer with no visible signs of improvement. The patient then suggested a consultation, and this idea I was much pleased with, and Dr. F. E. Wadhams was called to see her. We concluded to administer iod. pot. in large doses three times a day, and re-apply a fly-blister; also, to keep the bowels open freely, and administer only sufficient anodynes to control the pain. After five days trial of these remedies, they proved to be useless, and the operation of nerve-stretching was thought to be the only resort to effect a cure. However, other drugs were tried, including galvanism, hot hip baths, chloroform and soap liniments and massage for a number of days longer. The patient was confined continually to bed, and had been for several weeks, and as all therapeutical measures were given a sufficient length of time to produce their effect, and as both limbs, especially the right one, had become very considerably atrophied from her not being able to be about the house, although she was well nourished and had been at no time during the period of her trouble very sick, such as suffering from loss of appetite, or afflicted with nausea. The bowels remained soluble and quite regular, and the pulse and temperature normal. Her menses appeared regularly, and the flow was natural in other respects. Being disgusted with all that had been done, I insisted on the operation of stretching the nerve, which she emphatically objected to having done. I then visited her every two or three days for the succeeding three weeks, the treatment consisting chiefly of anodynes and the use of other ordinary remedies which resulted in no sign of curing the patient, and I explained to her that this additional length of time had been lost and her suffering had become quite unendurable. She now realized that something radical must be done, and she no longer resisted fromdread of an operation, and informed me that she would rather die than suffer the agonizing pain any longer, and that she was anxious for it to be done. On September 23d, Dr. L. H. Montgomery was invited in company with Dr. F. E. Wadhams to see the patient with me, and with this additional counsel we proceeded to perform the operation of stretching the nerve in the following manner:

After she was brought under the influence of the anæsthetic (chloroform being used), the patient was

placed on her left side. Then an incision was made by the first named gentleman, corresponding with the middle portion of the pyriformis muscle, and carried downwards about three inches. After the integument adipose and superficial fasciæ had been cut through, the gluteus maximus was divided, exposing the lower border of the pyriformis. He then inserted the index finger of the right hand, and, by gentle manipulation, was soon able to insinuate one, then two, fingers under the nerve, while the limb was extended and held by an assistant. The surgeon made constant traction for 15 minutes, until the nerve was stretched from above downwards, and vice-versa, to the extent (estimated to be about one inch); it is supposed also that the operator made a traction of *80 pounds*, as we determined subsequently in undergoing some experimental physical exercise. The wound was then cleansed by an antiseptic dressing of listerine, one part to six of water. There was no hæmorrhage but what was easily controlled by sponging. The edges of the wound were brought in apposition by three deep sutures of carbolized catgut and three superficial stitches; then with a simple pledget of cloth, saturated with the listerine solution, applied, which was secured with a bandage, completed the dressing. She was placed in bed, and expressed herself at once as being greatly relieved, and in the course of an hour we left our patient feeling very comfortable. I saw her again next day. She had not fully recovered from the effects of the anæsthetic, but the pain had completely ceased in the thigh. She spoke of having a slight pain extending from the knee to her ankle. I dressed the wound and administered small doses of chloral hydrat. On the second day after the operation, there was a slight rise in her temperature perceptible; the other symptoms remained the same. I prescribed two grain doses of quinine, to be given her every three hours, and dressed the wound. Third day; temperature normal; pain between the knee and ankle subsiding; dressed the wound again, and continued the tonic. Fourth day; all pain had ceased entirely, but a symptom that was somewhat aggravating had set in, as she remarked, "*There is cold water circulating through my limb.*" I ordered warm fomentations applied and resumed the chloral. There was no suppuration and the stitches were removed—wound nearly healed. Fifth day—The disagreeable sensation, "shooting of cold water," had considerably decreased, patient got up, treatment continued. Sixth day—The patient sat up for five hours. She felt well, but somewhat weak, and walked the first time in several months. Seventh day—She was up and about all day. No anodynes have been necessary the last two nights *and the wound is completely healed.* As the case presents nothing further of interest, I will state briefly in conclusion that the patient continued increasing in strength, her limb resumed the normal size, and she did not feel another paroxysm of pain after the operation, and the pains below the knee were extremely slight. She resumed her household duties in ten days and has remained well to date, Nov. 24th, there being not the slightest trace of any recurrence of the trouble, and she considers herself in perfect health. I am fully aware that in a single case we should not base our conclusions that every one will be as promptly cured as the writer's was, but it demonstrates what an obstinate and persistent course sciatica may pursue in a young subject who has always, enjoyed excellent health, *sine* the presence of any specific cause or neurotic taint whatever, and contrary to all treatment, would or did not subside under any method other than that of nerve-stretching, and my not having noticed in any of the researches available a typical case of this kind, arising from the cause mentioned, nor the operation described in detail. In reporting this case from a rural district (which I regard as having passed to a chronic form, being about three months duration,) my excuse for having done so at some length and giving the readers of the JOURNAL the principal points here for record is with the hope of ascertaining more in the shape of statistics regarding the percentage of cures, either from the use of therapeutical measures or surgical procedures, either by the application of the white-heated iron or the more modern way of nerve-stretching, L. H. M.

REVIEWS.

THE PATHOLOGY, DIAGNOSIS AND TREATMENT OF THE DISEASES OF WOMEN. By Graily Hewitt, M. D., F. R. C. P., Professor of Midwifery and Diseases of Women, University College, London. Edited with Notes and Additions by Harry Marion-Sims, M. D., Attending Surgeon to St. Elizabeth's Hospital, N. Y. New York: Bermingham & Co., 1883. 2 vols., $2.25 per vol.

The fourth edition of Hewitt's "Diseases of Women," having been rewritten to a large extent, now appears under the auspices of Harry Marion-Sims, of New York, with various [bracketed] annotations by the editor scattered through its pages. This is a form of revision having certain advantages in the direction of clearness and completeness. The items of difference in the opinions of the author and his editor or reviser are thus sharply defined, so that reference is assisted in the casual use of the book. This is the form of annotation employed in the revised "Holmes's Surgery,"

Hewitt's treatise, in its latest as in its earlier form, lays great stress upon the factor of impaired nutrition in the production of the various deformities and malpositions of the uterus, which he believes to be the usual cause of most complaints in gynæcology.

"Chronic starvation" thus underlies the writer's theories of uterine pathology, making general causes to supersede local ones, in contradiction to the ordinary assumption. In volume I this proposition is formulated as follows:

"That alterations in the shape and position of the uterus are rarely witnessed except in individuals whose general strength has become seriously impaired by a systematic, and often a lengthened practice of taking little food."

Aside from this important generalization the body of the work differs but little from the standard

treatises upon the somewhat narrow specialty it embraces.

It may be set down as certain that in England the medical profession looks with less favor upon the exclusive specialists who announce themselves as such, than in this country. The operative part of gynæcology belongs very fairly to general surgery, and the rest of the subject is so closely interwoven with general medicine, neuropathology and obstetrical practice, that its narrowing tendency in late years may need some watching.

More especially is this true in America, where the weakness of all enactments governing the practice of medicine, and the scandalous looseness which prevails in the popular medical colleges of New York and elsewhere, has filled the profession already too full of half-trained and half-qualified practitioners.

Such men are peculiarly unsuited for specialists, because peculiarly apt to be narrowed and dwarfed by their want of general training.

Professor Hewitt's book is the best English treatise on women's diseases extant, and also the most popular. It is not, however, in all respects equal to similar German and American works, and is by no means so widely consulted and followed among us.

E. W. A.

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 9, 1883, TO NOVEMBER 16, 1883.

Bache, Dallas, Major and Surgeon; ordered to report in person to the commanding general Department of the East, for assignment to duty. (Par 10, S. O. 259, A. G. O. November 12, 1883.)

Gardiner, Jas. B. W., Captain and Assistant Surgeon; relieved from duty at Fort Huachuca, and assigned to duty as Post Surgeon at Fort Bowie, A. T. (Par. 1, S. O. 104, Department of Arizona, November 8, 1883.)

Egan, Peter R., First Lieutenant and Assistant Surgeon; upon being relieved from duty at Fort Bowie, A. T., to proceed without delay to Fort Huachuca and report to the commanding officer at that post for duty. (Par. 1, S. O., 104, Department of Arizona, November 8, 1883.)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING NOVEMBER 17TH. 1883:

P. A. Surgeon, C. H. H. Hall ordered to the Naval Academy, Annapolis, Md.

DR. DOVER.—As many of us as there are who prescribe Dover's powder daily, it is doubtful that more than a baker's dozen know the origin of the name. Dr. Dover, so says the *Midland Medical Miscellany*, the originator of "Dover's Powder," was a friend and probably pupil of the great Sydenham. He commenced practice in Bristol, where, having made some money, he longed to make more. The roll of the College of Physicians tells us that he joined with some physicians in fitting out two privateers for the South Seas, in one of which, the "Duke," he himself sailed from Bristol August 2, 1708. On the passage out they touched at the Island of Juan Fernandez, where Dover, on the 2d of February, 1709, found Alexander Selkirk, who had been alone on the island for four years and four months, and whom Dover brought away in the "Duke." In the April following, Dover took Ginaguil, a city or town of Peru, by storm. In December, 1709, the two privateers took a large and valuable prize, a ship of 20 guns and 190 men, in which Dover removed from the "Duke," taking Alexander Selkirk with him as master, and finally reaching England in October, 1711. After this cruise, Dr. Dover removed to London, where his practice soon became great. His patients, and the apothecaries who wished to consult him, addressed their letters to the Jerusalem coffee house, where at certain hours of the day he received most of his patients.

THE SHOOTING OF DR. ROCHARD.—Dr. Rochard, of Paris, was recently shot by a lunatic, who had a few days before been discharged from a lunatic asylum as "cured." He gave himself up to the authorities, and confessed that for some days he had been haunted by voices telling him that, to remove the spell that was hanging over him, he should kill somebody. Accordingly he hid himself behind a tree in the Avenue Gabriel, near the Champs Elyseé, and Dr. Rochard being the first to pass, became the victim. At last accounts the doctor was not considered out of danger, and no attempt has been made to extract the bullet.

NECROLOGY.

WASHINGTON, October 12, 1883.

PROF. N. S. DAVIS, M.D., EDITOR,

DEAR DOCTOR:—I observe in the September number of the *American Magazine of History* (p. 260) a letter from H. E. Hayden requesting information as to the Brown of Maryland and Virginia, and particularly as to the Doctor Brown who was called in consultation with Drs. Craik and Dick during the last illness of General Washington. The enclosed sketches of the physicians of this family of Browns were prepared years since, and are included among the manuscript biographies in the "Toner collection" of the Library of Congress. As they supply the data requested by Mr. Hayden, should you deem the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION a proper channel to convey the information, they are placed at your disposal. Very respectfully,

J. M. TONER, M.D.

BROWN, GUSTAVUS, SR., was born in Haddingtonshire, near Edinburg, Scotland, and baptized the same day—April 26, 1689; died of apoplexy, at his

residence, known as Rich Hill, near Port Tobacco, Md., in 1765, aged 76. He was the grandson of Gustavus, and son of Rev. Richard and Jean (Mitchelson) Brown of Lalton Haddingtonshire, near Edinburg, in Scotland. His mother was Jean, daughter of Sir George Mitchelson, of the house of Middleton, Dalkeith. The Doctor's education, both academic and professional, was acquired at the renowned schools of Edinburg.

Although quite young, he was engaged as a surgeon on board one of the King's ships, which appeared off the coast of Maryland in May, 1708, where he was permitted to land; but shortly afterward a storm arose, and the ship was compelled to weigh anchor, and he was left in America, with nothing but his clothes upon his back.

He at once made his condition known to the inhabitants, who congratulated themselves on the acquaintance of an educated physician, and promptly supplied his wants. He engaged in the practice of his profession at Naujemay, Md., where, by his correct habits, skill, and devotion to his profession, he soon acquired the confidence of the people, and a large business. A record made by the Doctor himself reads: "I came into Maryland in May, 1708, and in 1711 married Frances Fowlke, daughter of Gerard Fowlke, in Naujemay, who was born 2d of February, 1691. In 1711 he was married to Francis, daughter of Gerard Fowlke, one of the most wealthy and aristocratic gentlemen in the colony of Maryland. The Fowlke family was from Staffordshire, Eng., and highly connected. The first of the family, says Burke's Peerage, having been knighted for services in Palestine during the crusade, as a reward for having saved the Christian camp under Richard I from a night attack from the infidels.

The doctor's professional business became large and lucrative. He was decidedly the leading physician of that period in Maryland and that part of Virginia on the Potomac, adjacent to his residence. After acquiring a handsome fortune by his profession, he returned to Scotland, with the thought that he might pass the remainder of his life there, and purchased an estate called "Cothel Mainside," and entailed it on his eldest son. But after a residence of a few years, he returned with his family to his old residence at Rich Hill, near Port Tobacco, Charles Co., Maryland, where his wife died in 1744, aged 53, leaving him a family of nine daughters and one son. First, Frances, who married the Rev. John Moncure, a descendant of the Huguenots of Stafford Co., Virginia; second, Sarah, who married the Rev. James Scott, of Prince William Co., Virginia; third, Mary, who married Rev. Wm. Hopkins, and afterward Mr. John Thulkeld, of Georgetown, D. C.; fourth, Christian, who married Mr. John Graham, of Dumfries, Prince William Co., Virginia; fifth, Elizabeth, who married Dr. James Wallace, of Stafford Co., Virginia; sixth, Richard, who was educated in Scotland, and attained orders in the Eestablished Church—he married Miss Helen Baily, in Scotland, and after her death the widow Key, formerly Miss Black, and afterward the widow Hawkins, formerly Miss Smoot; seventh, Jean, who married the Rev. Isaac Campbell, of Charles county, Maryland; eighth, Cecelia, who married first Dr. Key, and after his death Mr. Thomas Bond, of St. Mary's county, Md.; ninth, Anne, who married first Rev. Samuel Clagett, afterward Robert Horner, of Ripon, England, and lastly Mr. Samuel Hanson, of Green Hill, Charles county, Md. Dr. Brown, after the death of his first wife, married Mrs. Bond, by whom he had two children, Dr. Gustavus Richard Brown, at Rose Hill, near Port Tobacco, and Margaret, who married the Hon. Thomas Stone, of "Havre de Venture," Charles county, Maryland, one of the signers of the Declaration of Independence. During the religious wars of Northern Europe, about 1630, a number of young Scotch gentlemen of martial spirit joined the command of the renowned Gustavus Adolphus, of Sweden, among whom was the great-grandfather of the subject of this sketch. He had the address and ability to attract the attention of the King, which led to an intimacy between himself and the Prince Gustavus Vasa. This brought him into intercourse with the royal household, and finally led to a love affair, and a secret marriage between him and a Swedish princess, the niece of Gustavus Vasa, with whom he retired to Scotland after his military engagements ended. A grandson bore the name of Gustavus, and ever since it has been a favorite name in the family. The doctor's son by his second wife was named Gustavus Richard. He received his academic and medical education in Edinburg, graduating in 1768, and practiced with great success at Port Tobacco, Md. The death of the subject of this notice was sudden. He presented during his life a costly and magnificent organ to the Episcopal Church at Port Tobacco, and was always eminent for his charities. A portrait of him in oil is preserved by his descendants in Virginia, which shows him to have been a large and handsome man. His remains were interred in a family vault on his estate at Rich Hills, Md.

Brown, Gustavus Richard, M.D., born at Rich Hills, near Port Tobacco, Md., in 1748; died at the same place in 1804. He was the son of Dr. Gustavus Brown, Sr., by his second wife, Mrs. Bond. He received a good preparatory education and was then sent to Edinburgh, where he completed both his academical and medical studies. He graduated M.D. in 1768, his thesis was "De oetu animalium caloeris," a copy of which the writer has before him. He had for companions in his studies at Edinburgh and the Hospitals of London, Drs. Reed, of Philadelphia, and McLong, of Virginia. On his return to America he settled first at New Jersey, and from thence he moved to "Rose Hill," near Port Tobacco, and engaged in practice, which soon became extensive both in Maryland and Virginia. He married Miss Graham, of Dumfries, Prince William County, Va., by whom he left three children. He was a patriot in the Revolution, attended professionally soldiers. Represented Charles county in the State Legislature in 1774, and was a magistrate, at least, took a deposition in Charles county, October 18, 1776, relative to the burning of Mr. Brent's house by British forces from the armed vessel "Roebucke." In a letter of

the signer, Mr. Thomas Stone, of Maryland, from Philadelphia, September 30, to the Council of Safety, mentions the arrival of Dr. Brown, to whom he had written the day before. This is presumably his brother-in-law, Dr. Gustavus Richard Brown, and stating that he had been very ill since his arrival (American archives, 5 sec., vol. II. page 602). His estate was ample, his professional means considerable, his house large and elegantly furnished, and his grounds and garden cultivated with great care and most exquisite tase. His hospitality was unbounded. He was an affectionate husband, loving father and a kind master. His reputation as a skillful surgeon, and a learned physician was quite equal to his father's or that of any other physician of his day in Maryland or Virginia. Doctor Brown, practically a neighbor, was on intimate if not confidential terms with Gen. Washington, and was called in consultation in the last illness of the Father of His Country, whose death cast the deepest gloom over the American people. The doctor died greatly lamented by the public, and by a numerous connection and circle of friends. His remains are interred in the family burying ground on his farm, Rose Hill, Charles County, Md.

BROWN, WILLIAM, M.D., son of the Rev. Richard and grandson of Dr. Gustavus Brown, Sr., of Rich Hills, near Pt. Tobacco, Md.; born possibly in Haddingshire, Scotland, where his grandfather left an entailed estate, and where his father married while attending the University of Edinburgh.

His education, both academical and professional, was obtained at the renowned University of Edinburgh, where he received his degree of M.D. in 1770. He always, however, called himself an American, and he settled to practice his profession in Alexandria, Fairfax County, Va., where he soon rose to the front rank of the profession. He was a man of polished manners and high literary culture, and was intimately acquainted with Washington, Jefferson, Madison and the leading men of that period. He was Physician-General of Virginia during the Revolution and secured land form the State after the war. He married Miss Catharine Scott, sister of Gustavus Scott, of Kalorama, near Washington City, by whom he raised a numerous family. One of his sons, Gustavus Alexander Brown, studied medicine, and practiced in Alexandria. The subject of this notice was buried at Preston, on the Alexander estate in Fairfax county, near Alexandria.

BROWN, GUSTAVUS ALEXANDER, M.D., born about 1790 in Alexandria, Va., died in 1835 in Smithland, Ky. His father, Dr. Wm. Brown, of Alexandria, was Physician-General during the Revolutionary war. His mother's maiden name was Catharine Scott, of Scotch descent. The subject of this sketch graduated at Princeton, N. J., and studied medicine at the University of Pennsylvania, graduating in 1815. The subject of his thesis was Dysentery. He commenced practice in Alexandria and continued until 1825, when he returned to Smithland, Ky., in the neighborhood of which town he owned a large estate inherited from his father. He practiced medicine in Smithland till 1835 when he was killed in a private encounter. He was never married. His property at his death went to his heirs at law, he having died intestate. He was buried at Smithland.

J. M. T.

IN MEMORIAM.

[From "*Spence's People's Paper*," Covington, Ind., Oct. 11, 1883.]

DR. C. V. JONES, son of James M. and Elizabeth Jones, was born near Peekskill, on the Hudson river, in the State of New York, March 22, 1812, and died in Covington, Indiana, on Friday morning, October 5, 1883, aged 71 years, 6 months and 13 days.

In his boyhood his parents removed to the town of Spencer, in Tioga County, New York, where he spent his youth and early manhood, surrounded by the hardships and vicissstudes known only to frontier life. As a rail-splitter and wood-chopper he excelled, but while the sound of his axe was awakening new echoes in the forest, there were quickened within him new impulses and aspirations, and he honored this life of toil by using it as a stepping-stone to higher attainments. Choosing the profession of medicine, he applied himself with zeal to its study, for several years, under the private instructlon of a competent preceptor. With the earnings saved from his hard manual toil, he succeeded in taking a course of lectures at Herkimer College, and securing a license to practice medicine and surgery, under the laws of the State of New York, in the spring of 1834. On April 13 following, he was united in marriage to Phebe Watson, who has been his constant and faithful wife until this final sleep from which he awakened to enter upon the joys of the life beyond. Dr. Jones came of good Methodist stock. His mother, whose maiden name was Elizabeth Sproson, was a devoted member of this church, and her father, John Sproson, was a class leader in the old John street Methodist church, in the city of New York. Of this church, Dr. Jones was a life-long consistent member and supporter. His house has ever been the home of the itinerant. In 1838, Dr. Jones came to Indiana, settling first in Plymouth, Marshall county, whence, at the expiration of two years, he came to Covington, where he has ever since resided. During all these years, he has been closely and prominently identified with the interests of this town and county. As a physician, Dr. Jones enjoyed the respect and esteem of his profession, and his practice was very extensive. His reputation as a surgeon was especially prominent, his services as such having been required over a large territory. Combined with his skill and professional attainment, were a tenderness of heart, and sympathy with his suffering patient, which ingratiated him into the love and confidence of the household. He was the unanimously chosen President of the Fountain County Medical Society, in 1867, and upon its reorganization, in 1876, he was again chosen its President. He was a member of the Indiana State Medical Society, also of the Tri-State Medical Society, composed of physicians from Illinois, Kentucky and Indiana, and he was also a member of the American

Medical Association. All of which facts, more than most profuse encomiums, speak of his standing in the profession.

Dr. Jones represented this county in the State Senate from 1843 to 1846. He was appointed surgeon of the 1st Regiment of Indiana Volunteers in the war with Mexico, and served one year. In 1856, he was the candidate for elector on the Fremont presidential ticket. In 1860, he was elected Treasurer of the county, where he served a term of two years. In 1862 he was appointed provisional surgeon to the 40th Indiana Regiment, after the battle of Pittsburg Landing, remaining with it one month. The following winter, in February, 1863, he was commissioned surgeon of the 63rd Indiana Regiment, and served as such until March, 1865. He served as Commissioner of the first draft from Fountain County, under appointment from Governor Morton, between whom and the Doctor friendly and confidential relations existed. In all these public services, Dr. Jones acquitted himself honestly and creditably, laying down the escutcheon of his position or office untarnished for his successor. He was zealous in his advocacy of his principles, and uncompromising in their maintenance. Dr. Jones was the President of the first Grant Club organized in the United States. His many acts of kindness and thoughtfulness for the soldiers are yet recounted by them with much warmth of feeling for the doctor. Many times, on the long weary marches during the late war, did the doctor give up his horse to the feet worn and weary private, and take his place in the rank and file, to trudge along on foot. In all his relations in life this humaneness of heart was manifested by him. As a friend, he was warm and true; as an official, obliging and considerate; as a neighbor, kind and helpful; as a husband and father, loving and affectionate. A long life, full of kind deeds and helpful services, is closed, the memory of which will linger with this people like the sweet perfume of a rose. The funeral services were conducted by Rev. C. E. Lewis, pastor in charge of the M. E. church of this place, and for whom Dr. Jones entertained the highest regard. The 15th verse of the 17th Psalm furnished the text for the occasion. His remains were deposited in the Prescott Grove Cemetery, followed by a large concourse of sympathizing friends.

Capron, George, M.D., of Providence, R. I., was born in Cumberland, May 16, 1802, died at his residence in Providence, September 21, 1882. He was the son of Asa, and grandson of Joseph Capron. This name is probably Italian in origin. The doctor's mother was Sarah, daughter of Timothy Mahoney, an educated Irishman who came to America and devoted his life to teaching; owing to business reverses the doctor's father was unable to give his son much of an education. His youth was, therefore, passed on a farm and in a cotton factory. But he possessed a love for study and was in fact self-educated, acquiring while at work not only an ordinary English education but a knowledge of Latin and Greek. At the age of eighteen he began the study of medicine under Dr. Levi Wheaton, but at the same time continuing his studies in the classics. He attended one course of lectures at Harvard and a season at Brown University in Providence, his preceptor being at the time one of the professors in that school when he took the degree of M.D., in 1823. Immediately after he began practice at Fruit Hill, when he soon acquired a supporting country practice. At this period he took up the study of botany in which he attained some proficiency. In 1836 he removed to Providence where he became extensively employed. In 1869 he removed to the West, having accumulated some sixty thousand dollars by his profession, which he invested in mills and other property which proved disastrous. He then returned to Providence and resumed practice which he continued with occasional vacations to the time of his death. He was at one time physician to the United States Marine Hospital in Providence, and for three years surgeon in a State military organization, and during the war served for a time as volunteer surgeon at Hampton, Va. He was elected a member of the Rhode Island Medical Society in 1826. He was an active member and filled successively all its offices, and in 1850 was elected its president. He became a member of the American Medical Association in 1849 and attended meetings in 1853, 1865, 1874 and 1876. Dr. Capron was a close observer and was a good writer, contributing many papers of practical value to the *Boston Medical and Surgical Journal* and to the transactions of the Rhode Island Medical Society. He also published in 1844 a large popular work on medicine which had an extensive sale. In 1854 he added a supplement to it. He has left much unpublished material; he wrote a beautiful hand was a correct and ready composer, and rarely or never made an erasure.

Doctor Capron was twice married; first, July 9, 1823, Clariet Brown, who died in April, 1875. On June 1, 1876, he married Mary Ann Nixon, who survives him. His remains were interred in the North Burial Ground, and a memorial sermon preached by the Rev. Augustus Woodbury at the Westminster Congregational Church, September 24, 1882.—[From a sketch by W. E. Anthony, M.D.]

J. M. T.

Newman, William G. H., M.D., of Washington, D. C., was born in Princess Anne, Somerset county, Maryland, in 1827, died at his residence in Washington, November 6, 1883. He was descended from an old Maryland family that emigrated from England and settled in the State as early as 1650. He was educated at Washington College, Baltimore, and at the Jefferson College, Washington county, Pa. Dr. Newman read medicine with Prof. N. R. Smith, in Baltimore, and received his medical degree from the university of Maryland in 1849. He practiced for some years in Georgetown, but returned to Washington, where he acquired a large practice in the west end of the city. Doctor Newman was at one time a member of the city council, and was at the time of his death the physician in chief of St. Ann's Infant Asylum, a position which he has held for fifteen years. He was also for many years one of the police surgeons,

and has been for years one of the staff of Providence Hospital ; was a member of the old board of health of the city, and was for some years on the board of visitors to the Washington Asylum or Almshouse. He was a member of the Medical Society of the District of Columbia in 1858, also a member of the Medical Association of the D. C., and a member of the American Medical Association since 1868, attending its meetings when it convened in Washington in 1870 and 1872. Shortly after entering the profession Doctor Newman was united in marriage to Mary Rider, of Somerset county, Md., by whom he had six children, who survive him—one of his sons, Henry M., being a practicing physician in this city. On the anniversary of Dr. Newman's death the Medical Society held a special meeting which was numerously attended, when resolutions of respect for his memory and of condolence with his family were passed, and the society resolved to attend his funeral. His funeral took place from St. Stephen's Catholic church on Thursday morning, November 8, when a solemn requiem mass was said. His remains were followed to the cemetery by many physicians and by a large concourse of friends.

J. M. T

DANA, ANDERSON GREEN, M.D., was born at Cambridge, Mass, Sept. 17th, 1791. Died at Brandon, Vt., Aug. 20th, 1861. He was the son of Rev. Nathan Dana, a Baptist clergyman. At the age of 18 years he commenced the study of medicine. After three years as a student he attended a course of medical lectures in Philadelphia, in the winter of 1812–13. Shortly before this his father had removed with his family to Vermont. Doctor Dana, after leaving Philadelphia, went to Boston in the spring of 1813. and daily visited the hospitals for clinical study of surgery especially. Soon after he settled in Brandon, Vt., for medical practice, where he ever after lived. In July, 1813, he received his license to practice from Rutland County Medical Society, When Vermont Medical Society was chartered, in the autumn of 1813, Dr. Dana was named in the act of incorporation. He was ever afterward a member of this Society, and was its President in 1843 and 1844. One of the orginal members of the American Medical Association in 1846 and again in 1849. In 1830 he received an honorary degree of M.D. from Castleton Medical College, and in 1860 he received the honorary degree of LL.D. from Middlebury College. In August (11th) 1816, Doctor Dana married Miss Eliza A. Fuller, a writer of some prominence, especially of poetry, the daughter of Roger Fuller, Esq., of Brandon. Doctor Dana, as a physician, was a man of learning, of quick perceptions, of calm and deliberate judgment. He became very popular, a man everywhere known and respected. He mingled much in public affairs, in legislation, often presided at public meetings, always with marked ability, was a fluent speaker, with a ready knowledge of rules and facts.

He was physically strong and healthy, tall and well-formed. He had much personal dignity, combined with a pleasant, cordial manner, free from ostentation.

He was a member of the Congregational church, an exemplary Christian in deportment and character. During the last six or eight years of his life he suffered from disease of the heart, was obliged to retire from all active duties and live very quietly.

His life was long and useful, and he died lamented by a large circle of friends. A wise and good man gone to his rest.

O. F. FASSETT, M.D.

TURNIPSEED, EDWARD B., M.D., died, aged 52, at Columbia, S. C., April 18, 1883. He was born in Richland District, S. C., and was educated at the Mt. Zion Institute. After graduating in medicine at the Medical College of the State of South Carolina, he pursued the study of his profession for two years in Paris ; afterwards offering his services to the Czar of Russia, and acting as surgeon in Sabastopol during the seige. For his distinguished services the Czar rewarded him with three decorations, including the cross of Staune, and 1,500 roubles. During the late civil war, Dr. Turnipseed acted for a time as surgeon to the 12th Regiment. He then practiced his profession with much success in Columbia, where he was much beloved, by reason of his ability and his kindness of heart. He was fond of surgery, and he performed many capital operations. He had a singularly inventive faculty, and he constructed several ingenious surgical instruments. Dr. Turnipseed was an active member of the State Medical Association, and he was almost a pioneer in the organization of "Way-side" hospitals, which attained great perfection at the South during the late war. He has written an important paper on the subject.

P. PEYRE PORCHER, M. D.
Member of Committee S. Carolina Am. Med. Assoc'n.

WAR ON QUACKERY.

SPECIAL MEETING OF THE ILLINOIS STATE BOARD.—A special meeting of the State Board of Health was held on Saturday last, in Chicago, at which the President, the Hon. Newton Bateman, LL.D., of Galesburg ; A. L. Clark, M.D., of Elgin ; John McLean, M.D., of Pullman, and the Secretary, Dr. John H. Rauch, were present. The object of the meeting was mainly to take action in the cases of a number of medical men against whom charges of unprofessional and dishonorable conduct had been preferred. The charges against Dr. Frank B. Smith, formerly of Chicago, and lately of Peoria, and Dr. Alexander Jones, consisted not only in the claim that they were itinerant physicians, and that they went from place to place, soliciting medical custom, but that they were associated with notorious quacks and medical mountebanks or worse, Smith being employed by "K. & K.," a firm of typical charlatans, having their headquarters in Detroit. Jones, it was stated, had been emulating Smith's example, but his present whereabouts are unknown. After a thorough examination of the evidence offered in support of the charges, including written statements of various witnesses, the Board ordered the revocation of the certificates of these parties.

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ORIGINAL ARTICLES.

FACTS AND NEW EXPERIMENTS IN ILLUSTRATION OF THE VARIATIONS OF PULSE-WAVE VELOCITY IN MAN, AND BEARING UPON THE ELUCIDATION OF THE CAUSES WHICH PRODUCE THEM.

BY A. T. KEYT, M.D., CINCINNATI, O.

CHAPTER II.

This division of our subject we will study under the form of a series of propositions, and it is intended that the facts brought forward to substantiate the propositions stated shall also enlighten on the causes of the variations in question.

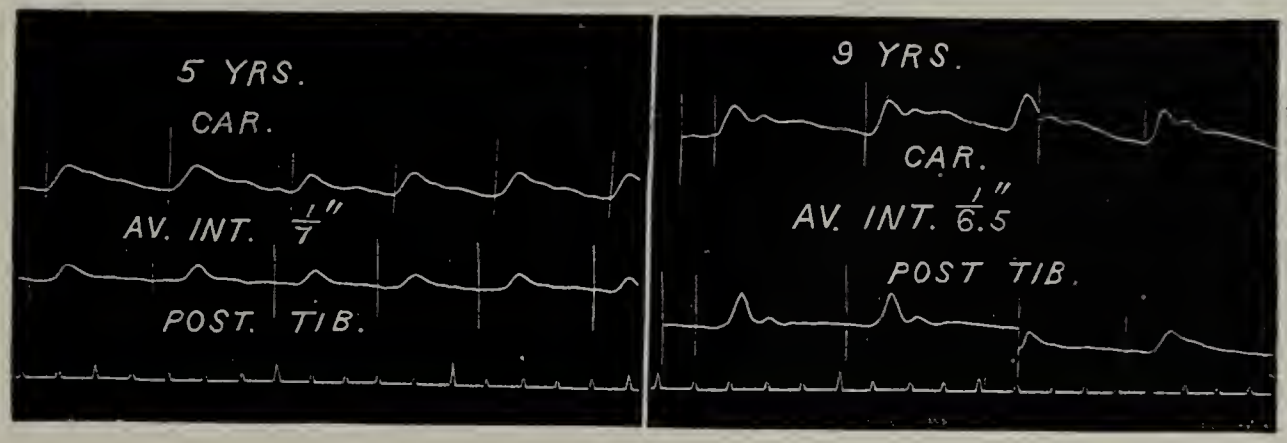


FIG. 26, 27.

PULSE-WAVE VELOCITY.

PROPOSITION. I.—The velocity of the pulse wave along the arteries increases with increase of age. This proposition has already been proven by our previous researches.* We observed and measured the pulse-wave velocity in a child of four and a half years, a man of twenty-five, and another of fifty. In the first the general velocity was 216 inches per second, in the second 306 inches, and in the third 416 inches per second. As a pertinent illustration of the fact in question, the accompanying figures representing new experiments may be studied. Fig. 26 is from a child five years old, and gives a carotid-posterior tibial interval of one-seventh second; his arterial length between the points of observation measured (approximately) 28 inches; hence his pulse-wave velocity was 196 inches per second.

Fig. 27 is from a boy nine years old; carotid-posterior tibial interval averaging two-thirteenth second, arterial distance 38 inches, velocity of pulse-wave 247 inches per second.

Fig. 28 is from a man, aged 21 years; carotid-posterior tibial interval one-seventh second; arterial distance 50 inches; velocity of pulse-wave 350 inches per second.

Fig. 29 is from a man aged 55 years; cardio-dorsalis pedis interval averaging one-tenth second; arterial distance 51 inches; velocity of pulse-wave 510 inches per second.

The fact that pulse-wave velocity increases with age, thus so thoroughly established, signals indeed a range of variation the widest that will be noted in all our results. What now is the cause of this marked variation with age?

Relating to the question as between the child and adult, there are four points that claim to be noticed, viz., feebler pulse-waves; smaller arteries; lower blood-pressure; and thinner arterial coats, in the child.

In the light of our experiments with tubes (1) feebler waves would have no modifying effect on pulse transmission; (2) smaller arteries would increase the rate; (3) lower blood-pressure would tend to diminish the rate; and (4) thinner arterial coats would decidedly slow the velocity of the pulse-wave. Of these factors of modification, it would seem to be just to consider the smaller arteries and lower blood-pressure as about counterbalancing each other, and then the thinner arterial coats would be left by the process of exclusion as the efficient cause of the pulse retardation in young children.

As between younger and older adults, it is plain that the only principle which can be invoked in explanation of the difference in pulse-wave velocity, is the increasing stiffening of the arterial walls with the progress of age.

The point needs to be pressed no further; the velocity of the pulse-wave increases with age, in conse-

* See New York Medical Journal, February, 1878 and July, 1878.

quence of the progressive stiffening of the arteries as an effect of advancing years.

PROPOSITION II.—Arteries stiffened by atheromatous and calcareous degeneration give a rapid pulse-wave velocity.

PROPOSITION III.—The velocity of the pulse-wave is directly proportional to the stiffness of the arterial walls.

PROPOSITION IV.—Variation of the pulse-wave velocity as the result of variation of blood-pressure is not easily made manifest.

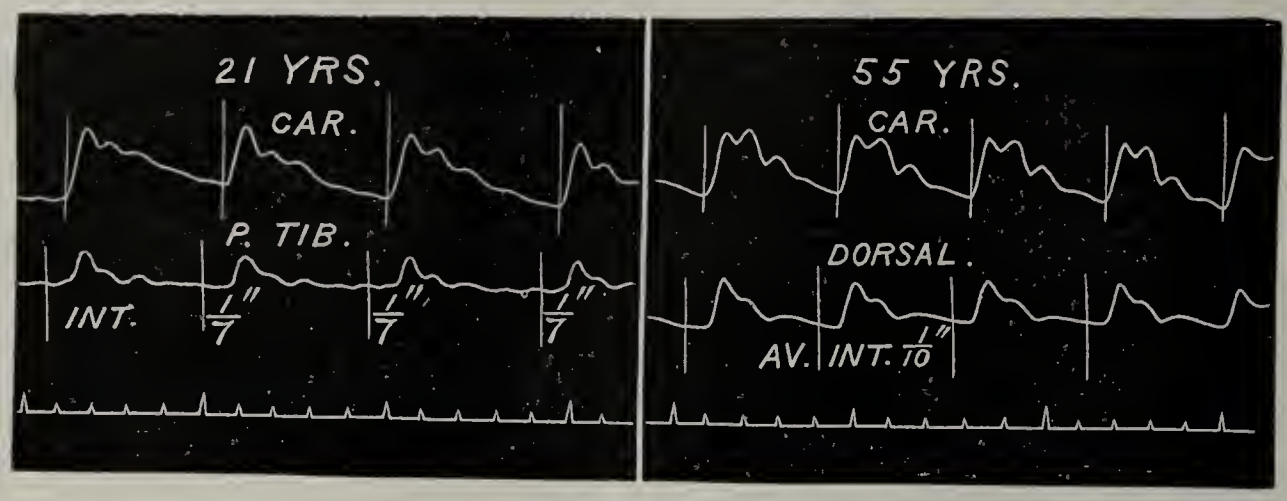


FIG. 28, 29.

We have before published a case[1] in which the arteries were greatly hardened by degeneration, as found post mortem, and in which the carotid-radial interval was measured at $^1/_{30}$ second.

Fig. 30 is from a woman aged 65 years, who had a basic systolic murmur and a very rigid, knobby, radial artery, that felt like a cord high up in the arm; and who subsequently died from cerebral apoplexy, the result, undoubtedly, of rupture of a degenerated intra-cranial artery. In these traces the carotid-radial interval measures $^1/_{21}$ second.



Fig. 30.

These cases and intervals demonstrate the rapidity of pulse-wave transmission along pathologically hardened arteries; and, in connection with the foregoing facts, afford ample proof of the following proposition:

[1] See *New York Archives of Medicine*, October, 1882, p. 118.

These traces and intervals demonstrate the rapidity of pulse-wave transmission along pathologically hardened arteries; and, in connection with the foregoing facts, afford ample proof of the following proposition:

PROPOSITION III.—The velocity of the pulse-wave is directly proportional to the stiffness of the arterial walls.

PROPOSITION IV.—Variation of the pulse-wave velocity as the result of variation of blood-pressure is not easily made manifest.

For purposes of comparison the general blood-pressure may be reduced by bleeding, by the hot bath, by nitrite of amyl, etc., and is found reduced in adynamia, and increased notably in Bright's disease. We instance here, first, the hot-bath experiment.

Fig. 31 shows tracings of the right carotid and left radial pulses from a man aged 30 years, taken just before the bath, and then while in the bath after marked modification in the circulation had been effected.

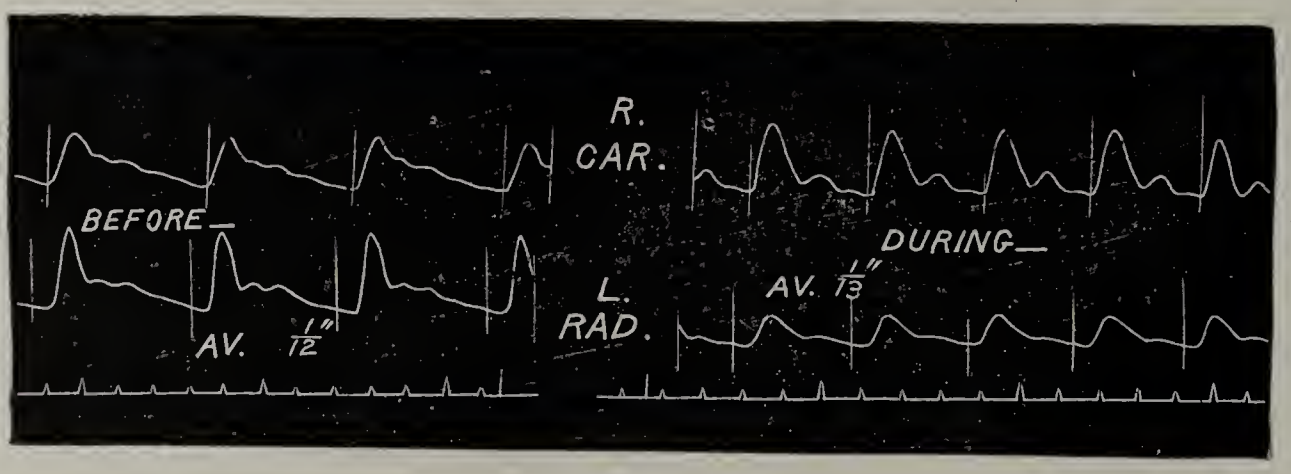


Fig. 31.

Notwithstanding the great reduction of the blood-pressure, as indicated by the form of the traces and lower pressure, by the manometric tube, at which the radial pulse was best developed, the time intervals before and during the bath were nearly equal, averaging under the first condition about $^1/_{12}$ second, and under the last about $^1/_{13}$ second.

It was to be expected that such depression of the blood-pressure would have signaled a corresponding slowing of the pulse-wave velocity; that it did not was probably owing to the influence of compensating conditions. Thus the arterial tube, in consequence of rapid escape of its contents through the open capillaries into the veins, would diminish the caliber, and, so contracting, thicken its walls. These changes would expedite the transmission of the pulse-wave, and in the case shown more than neutralize the impeding effect of the lowered blood-pressure.

Our next illustration is from a well-grown boy, aged 17 years, suffering from severe and protracted typhoid fever complicated with mitral insufficiency. The traces shown (Fig. 32) of the carotid and radial pulses were taken on the thirty-sixth day, when adynamia was well pronounced, temperature 101°, and pulse to the fingers, frequent, small and very compressible. It will be observed that the average time interval—$^1/_{15}$ second—corresponds closely with normal showings, notwithstanding the evident low-blood pressure under which the experiment was made.

The default in this case we would explain as in the last; only the retarding effect of the extremely low blood-pressure would be counterbalanced by the accelerating effect of arterial tubes contracted to adapt themselves to contents lessened by general anæmia as well as free capillary passage, to say nothing of the inadequate arterial supply as an effect of the mitral regurgitation present in the case.

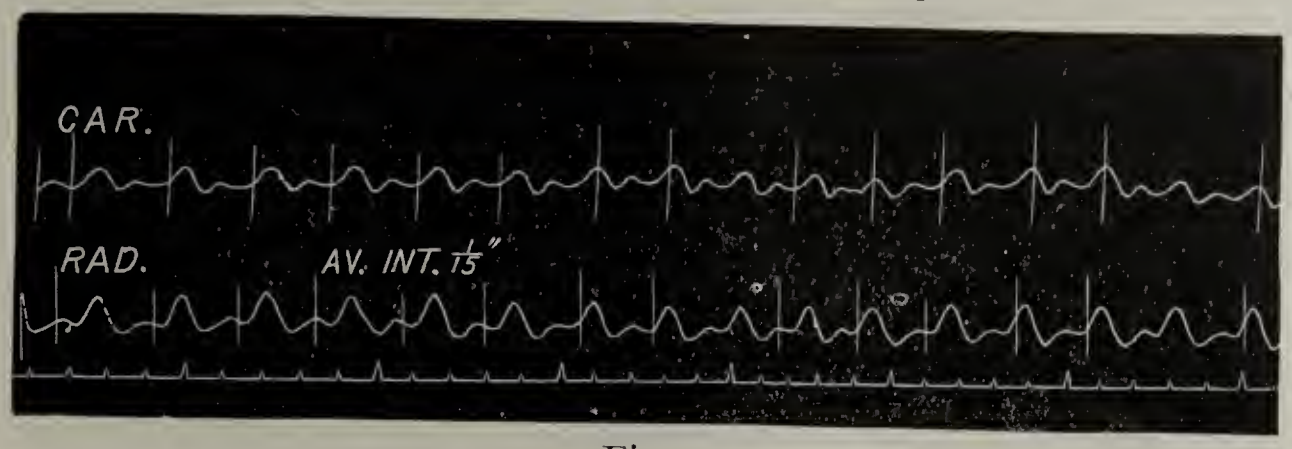


Fig. 32.

Our third illustration is furnished by the influence of nitrite of amyl on pulse transmission.

Fig. 33 is from the same man, who gave the traces (Fig. 31) of the hot bath experiment. In this instance his left carotid and right radial were taken, it being observed that his right radial was more superficial and gave a better trace than the left. When all was ready his standard was first traced, as shown in the first part of the figure, then the slide was halted, the explorers being kept in their positions and the amyl inhaled until its peculiar effects were manifest, when the slide was started again and the experiment finished.

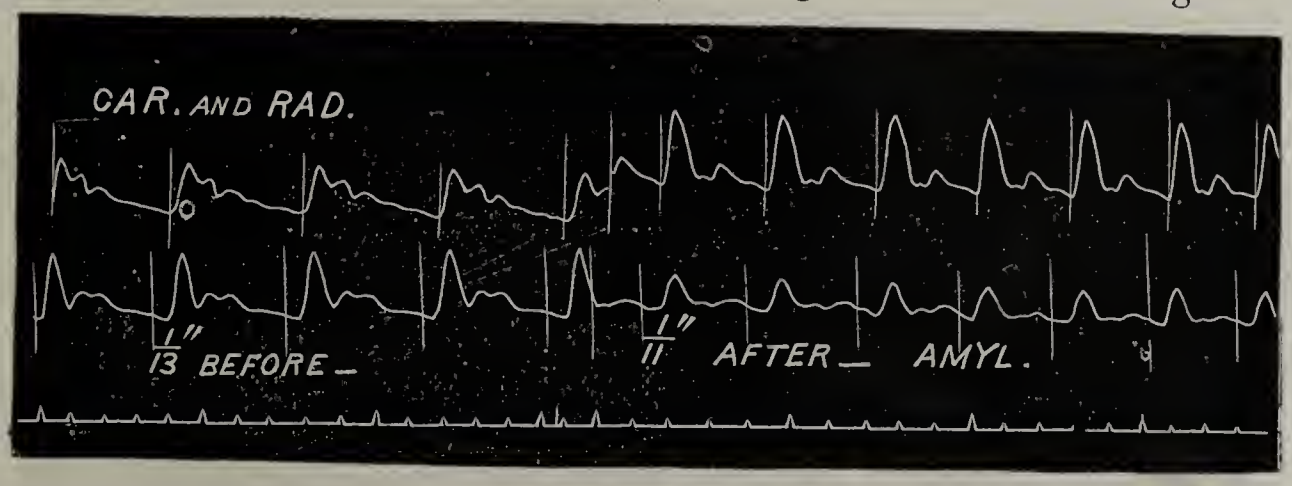


Fig. 33.

The carotid-radial interval measures from $^1/_{14}$ to $^1/_{13}$ second before, and about $^1/_{11}$ second after the inhalation.

In this experiment vaso-motor paralysis would dominate all other modifying factors, joining its re-

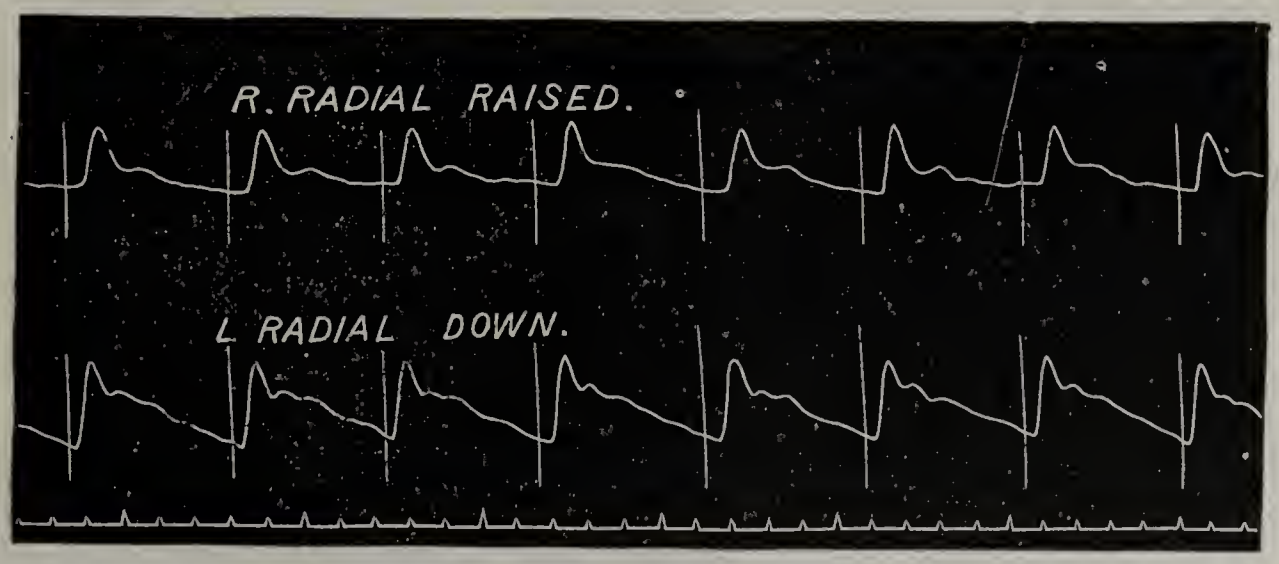


Fig. 34.

tarding force to that of induced lowered blood-pressure, and antagonizing reduction of arterial caliber, and so obviating or diminishing the speeding effect that would otherwise ensue therefrom.

Continuing our researches on the influence of different blood pressures, we will next study the effect of variation produced in certain arteries. The blood pressure in the arteries of a limb is markedly depressed by elevation, and elevated by depression of the limb. Accordingly if the two radials, which normally are synchronous at the same level, are traced with one arm considerably higher than the other, the result will be instructive as to the influence on pulse transmission of a suddenly lowered blood-pressure. Or the same end may be accomplished by tracing a carotid and radial with the radial first depressed and then elevated, and afterward comparing the intervals before and during the elevation of the arm.

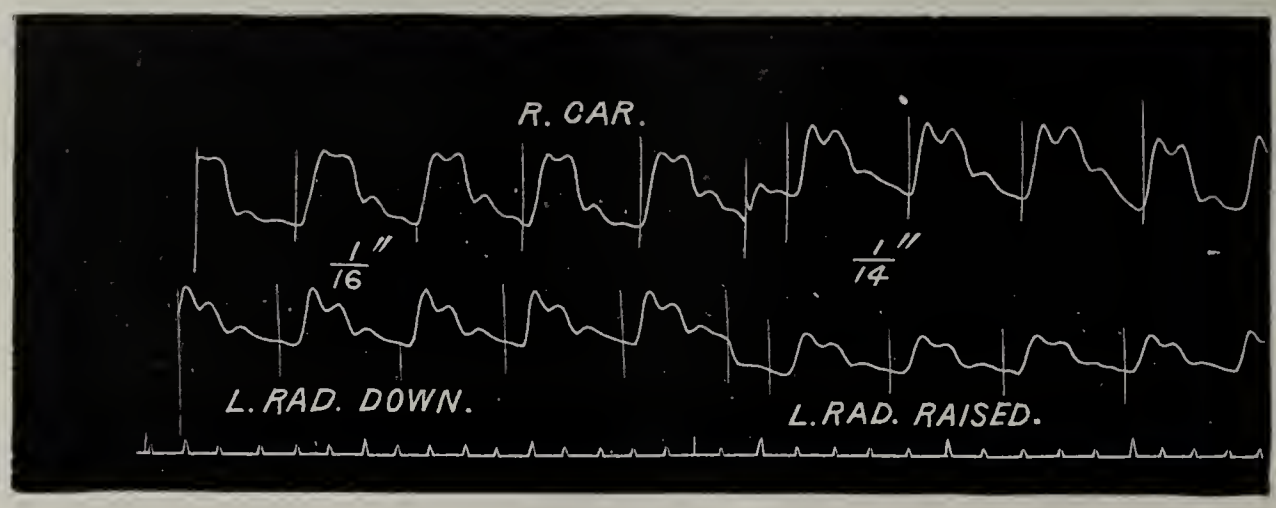


FIG. 35.

The experiment by one or the other method we have performed many times, and usually with more or less retardation of the elevated pulse, but sometimes without any difference. Figures 34 and 35 taken from different persons and by the two methods mentioned, exemplify very common phases of result.

The fact that the delay is often small and sometimes fails to manifest under conditions of such revulsion of blood-pressure leads us to seek, and, we believe, to find the explanation of the variable effect of the experiment in behavior of the arterial coats. When delay is great the coats are left relaxed after retreat of the blood; on the contrary when the delay is slight or *nil*, the coats contract as the contents depart.

The change from standing to lying with trunk and head horizontal and lower limbs highly elevated, must cause a very considerable augmentation of blood-pressure in the arteries of the upper extremities.

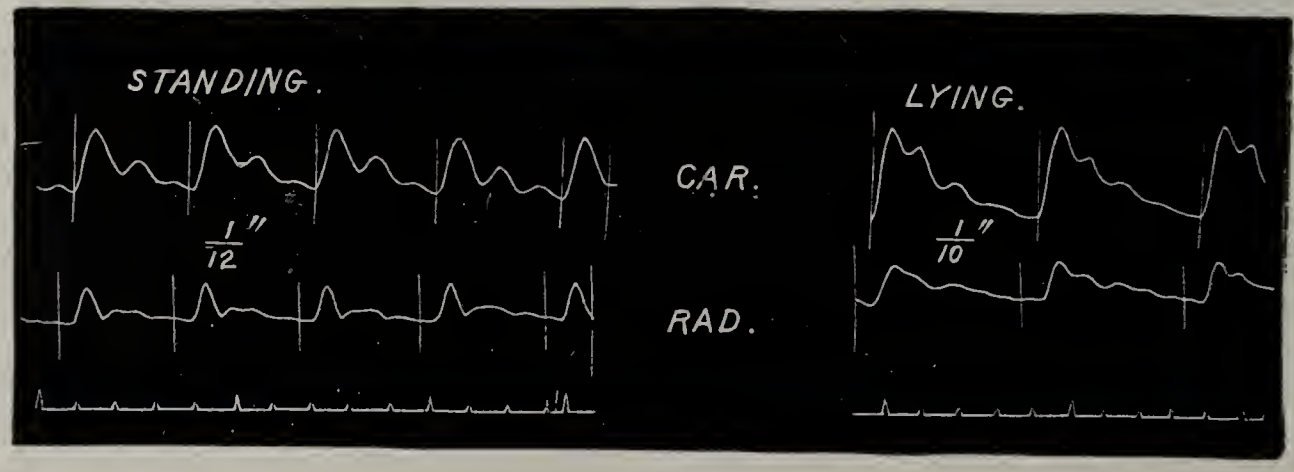


FIG. 36.

Figure 36 is an example of the carotid and radial traced under these opposite conditions.

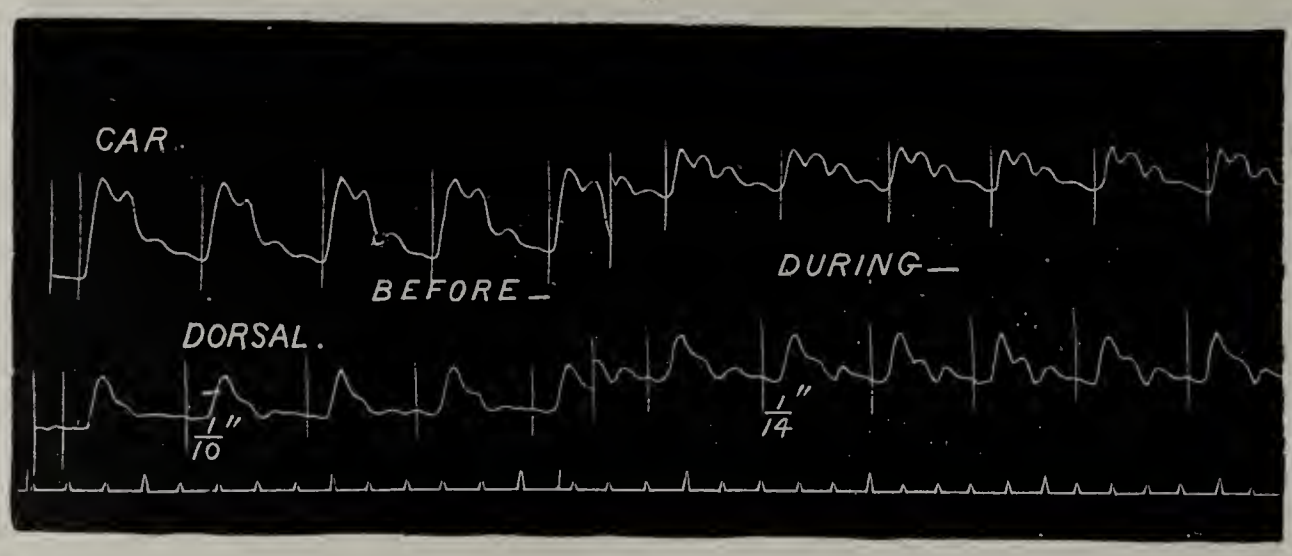


FIG. 37.

The intervals are $^1/_{12}$ second standing and $^1/_{10}$ second lying. So we have here the paradoxical result of a slower pulse-wave velocity following directly upon increase of blood-pressure. Can we explain the phenomenon? The speeding influence of increased pres-

sure is antagonized by the slowing influence of enlarged tubes and walls made thinner and more elastic by distension. We may suppose that arterial tone is a somewhat variable entity, as stimulated by interior pressure; in one instance permitting the fibers to relax to an extent, softening the walls; in another tightening the fibers, stiffening the walls.

"The effort," by which is meant making a strong expiratory effort with the glottis closed, compresses the aorta and thoracic and abdominal viscera, driving the blood into the arteries of the extremities, raising their blood-pressure in a marked degree. We have often made the experiment for testing the rate of pulse transmission before and during the effort, and almost invariably with the result of proving a swifter transmission during the effort.

Fig. 37 is a fair example of result in this experiment in which the carotid and dorsalis-pedis were traced.

Intervals about $^1/_{10}$ second before and $^1/_{14}$ second during.

Sudden compression of the femorals is another means of augmenting the pressure in the arteries of an upper extremity.

Fig. 38 is from a boy, aged nine years, the same that produced Fig. 27, taken before and during compression of femorals.

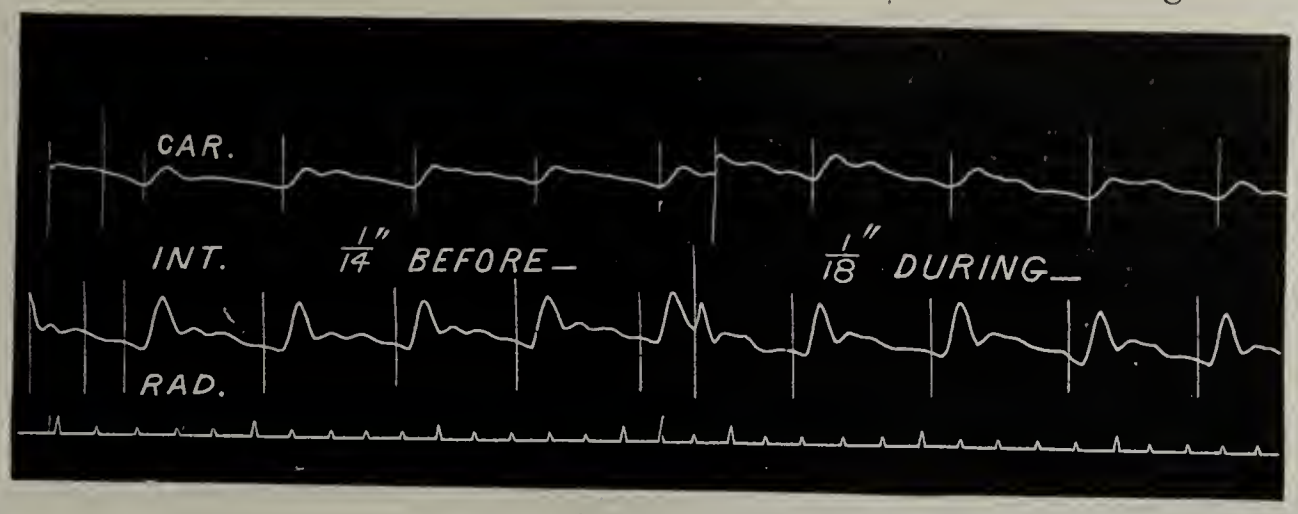


Fig. 38.

Carotid-radial interval $^1/_{14}$ second before and $^1/_{18}$ second during.

In explanation of the result in the last two experiments we only remark that the modifying forces were so acting as to throw the balance on the side of pulse-wave acceleration.

It is not deemed necessary to produce other experiments in illustration of the proposition before us. All the experiments go to demonstrate the inefficiency and uncertainty of variation of blood-pressure as a direct modifyer of pulse wave velocity. Indeed, in view of the results obtained, it may fairly be questioned whether variation of blood-pressure acts at all except as it influences arterial elasticity. We have seen, how, in experiments with inert tubes, increased pressure produced no increase of wave velocity until tubes were employed whose walls were as lax or laxer than those of living arteries. And we have just seen how in experiments on living arteries no certain acceleration follows increase, or retardation decrease of blood-pressure. Such a result both on the schema and man was unexpected, nevertheless the logic of facts must be accepted.

PROPOSITION V.—The velocity of the pulse-wave varies without notable change of the conditions.

Traces already produced afford abundant evidence of this incessant oscillation of pulse-wave velocity. A critical measurement of the successive time-differences in the figures will prove a slight variation between most of them, and between some a difference quite marked. For illustration, we refer to Fig. 27, where the carotid-posterior tibial interval in successive pulsations, quite uniform, changes from $^1/_6$ to $^1/_7$ second; also we produce a new illustration:

Fig. 39 is from the same young man who furnished Fig. 28, and both were taken on the same day. The time-differences of Fig. 28 vary but little from $^1/_7$ second throughout, while those of the present figure show considerable variation, and the average is less

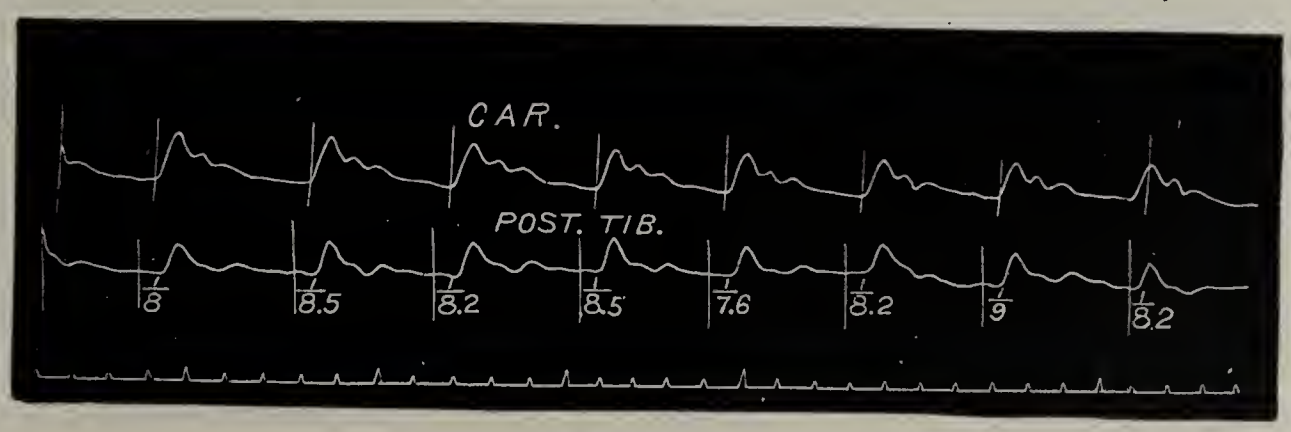


Fig. 39.

than $^1/_8$ second. So here are two runs of traces taken from the same arterial points of the same subject, under similar conditions, and the time intervals in one averaging $^1/_7$, and in the other less than $^1/_8$, second.

Further, we carefully measured each time-interval of Fig. 39, and marked the result in the fractions on the slide. The measurements, converted into decimals, read in order, .125, .117, .122, .117, .131, .122, .111, and .117, second; which gives an average of .120 second. Besides, on another slide, with traces taken from the same individual some

months previous, the time-differences vary around $^1/_6$ second.

If it be thought that these variations may be results merely of instrumental and mensural errors, we reply that this is impossible. In the method employed it has been proved that the range of instrumental error is so small that it may be neglected, and possible errors of measurement are insignificant, compared with these differences. Again, when we measure successive intervals between waves in inert tubes, the fractions obtained are remarkably uniform. Thus in Fig. 3, the formula of measurement runs without material variation—$^5/_{24}$ of $^2/_5 = ^1/_{12}$ second; and if it be found that the numerator varies from 5, it will also be found that the denominator correspondingly varies from 24.

Another point is, that in the repetitions with the same tube, under the same conditions, the intervals were always the same, while in repetitions with the same individual, under apparently the same conditions, the intervals are often unequal.

Then we deem it sufficiently demonstrated that the variations in question have a real existence.

One theory alone can be offered in explanation of these variations, viz., that the state of contraction of the arterial fibers varies at short intervals, and, so hardening or softening the arterial tubes, causes the pulse-wave to travel with swifter or slower velocity. No other modifying factor can be invoked, and variation of arterial elasticity we have seen is a certain and potent modifyer; moreover, there can be no hesitation in accepting as a physiological fact such implied variation of arterial tone. In a word, under the conditions named, the velocity of the pulse-wave varies in consequence of variations of arterial tone; increase of tone causing increase, and decrease of tone, decrease of velocity.

PROPOSITION VI.—The pulse-wave velocity is not modified by variations of pulse frequency. This fact has been sufficiently illustrated by results already produced. Instance Figures 31 and 32, in which, notwithstanding marked increase of frequency of the pulsations, the time-intervals remained at normal values.

Indeed, the proposition would be sustained by considering, first, that the artery starts to rise from the same status at each pulsation, whether the intervals between the waves be long or short; and, second, that quickness of pulse, which usually accompanies frequency, can have no influence upon pulse transmission, since it has been demonstrated that a quick wave and a slow wave travel along the same elastic tube at the same rate of speed.

PROPOSITION VII.—The velocity of the pulse-wave is different for different arterial tracts. This proposition has already been well established, and for its illustration here we reproduce a figure previously published,[1] which gives the result of an experiment, in which the pulsation of the heart, carotid, femoral, radial, and posterior tibial, arteries, and the time in fifths of seconds, were traced simultaneously.

This experiment, so prolific in facts, gives the following results regarding the pulse transmissions along different routes: Carotid-femoral time, .0797″, which, with a distance of 18 inches, gives a pulse velocity of 226 inches per second. Carotid-radial time, .0797″, which, with 23 in. distance, gives a pulse velocity of 288 in. per second. Femoral-posterior tibial time,

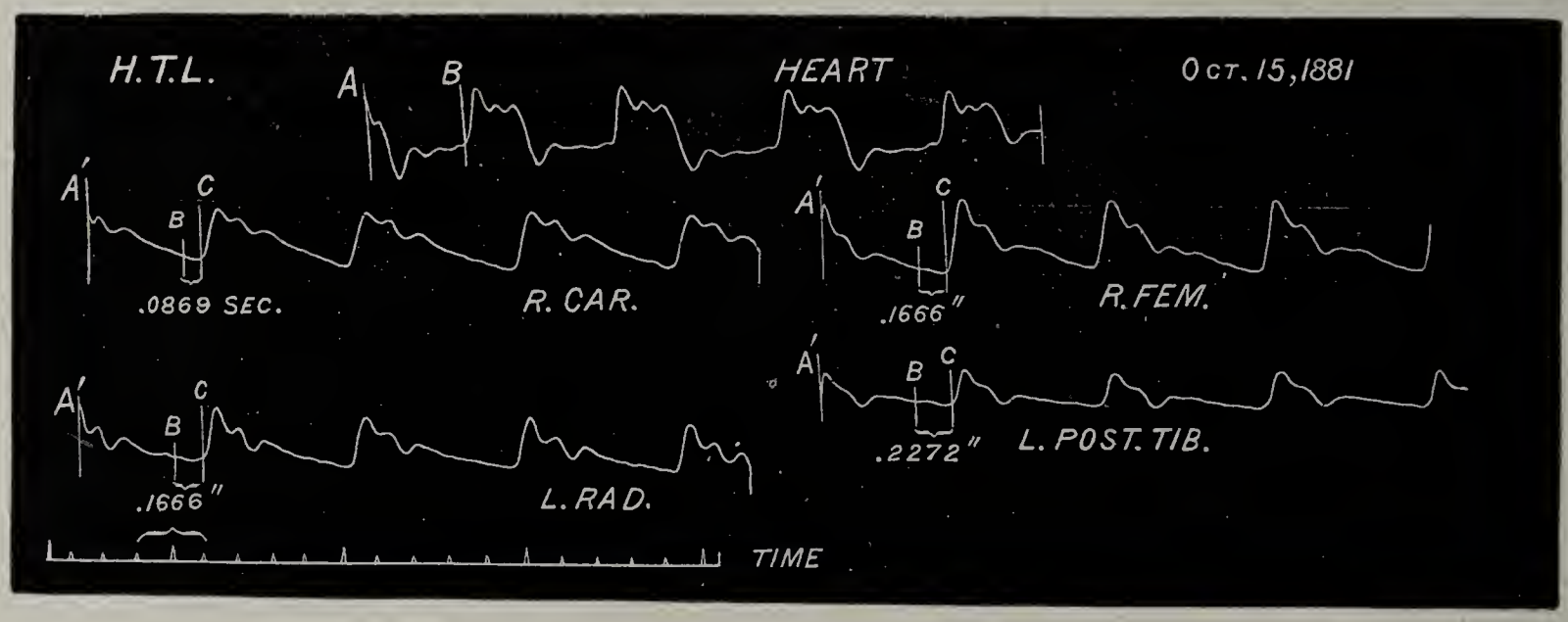


FIG. 40.

.0606″, which, with 33 in. distance, gives a pulse velocity of 544 in. per second.[2]

Thus it is well shown how the rate of pulse transmission varies in value along these different lines, and now the problem as to the cause of these differences presents for solution. Pertaining to the arteries there are four points of difference in condition, viz: (1) difference as to giving off of branches; (2) distance from the heart; (3) state of elasticity; and, (4) size. The question as to any modifying influence of the first two has been settled in the negative by our results with tubes. As to the third, it is a well-known fact that the aorta is highly elastic; its coats are thick, yet extremely soft and pliable, and yield with the greatest readiness to increase of interior pressure, to promptly return when the pressure diminishes. The aorta, it is safe to say, is more exquisitely elastic than the arterial trunks of the ex-

[1] New York Archives of Medicine, June, 1882, p. 231.

[2] The cardio-arterial intervals are expresssed on the cut, and the arterial intervals are obtained by deducting the lesser cardio-arterial from the greater; thus, cardio-femoral interval .1666″—cardio-carotid .0869″, gives .0797″ as the carotid-femoral interval, and so on for the other arterial intervals.

tremities, and to this difference in elasticity we are led to attribute in part the comparative slowness of aortic pulse transmission. And in regard to the small but real difference of rate between the upper and lower extremities, an assumed greater resistance in the arteries of the lower is the only explanation that offers of the faster transmission in the latter.

Difference in size of the arteries is in reality the potent factor which makes the pulse travel slower along the aorta than along the other arteries. This conclusion is inevitable when we remember the law that wave-velocity is proportional inversely to the size of the tube traversed, and the fact that the aorta is many times larger than the arteries of the limbs.

PROPOSITION VIII.—The time of appearance of the pulse-wave is delayed in arteries in which the blood column has been much reduced by obstruction of the current.

The experiment upon which this proposition depends for proof is readily made on man by tracing the two radials before and during compression of one axillary or brachial; or by tracing the two posterior tibials or dorsals before and during compression of one femoral or popliteal; or again, the method may be pursued of tracing a near and more distant arterial point, as the carotid and radial, before and during compression of an intermediate point, as the axillary or brachial.

Figures 41 and 42 are examples of results from such experiments on two individuals of different ages. The delay in either occasioned by the obstruction is about $\frac{1}{40}$ second.

In explanation of pulse delay from this cause, from our experiments on tubes, we need take no other account than that of check at the site of obstruction. The condition of the artery below, if contracted and diminished in size (which is probably the case), would only tend to lessen the delay.

PROPOSITION IX.—The velocity of the pulse-wave is diminished in arterial trunks affected with vaso-motor paralysis.

This proposition is a necessary corollary of facts already acquired. In vaso-motor paralysis the arterial coats are relaxed and the arterial caliber enlarged, both of which conditions are effective factors of pulse retardation. Besides, we have published a case[1] with tracings in which the phenomena of general vaso-motor paralysis were well declared, with coincident remarkably slow pulse transmission.

PROPOSITION X.—The time of appearance of the distal pulse is delayed in aneurisms with yielding walls and free communication with the artery; while there is no delay in aneurisms with resisting walls, even though freely communicating, unless the aneurisms directly obstruct the arterial current, or diminish wave velocity by producing vaso-motor paralysis.

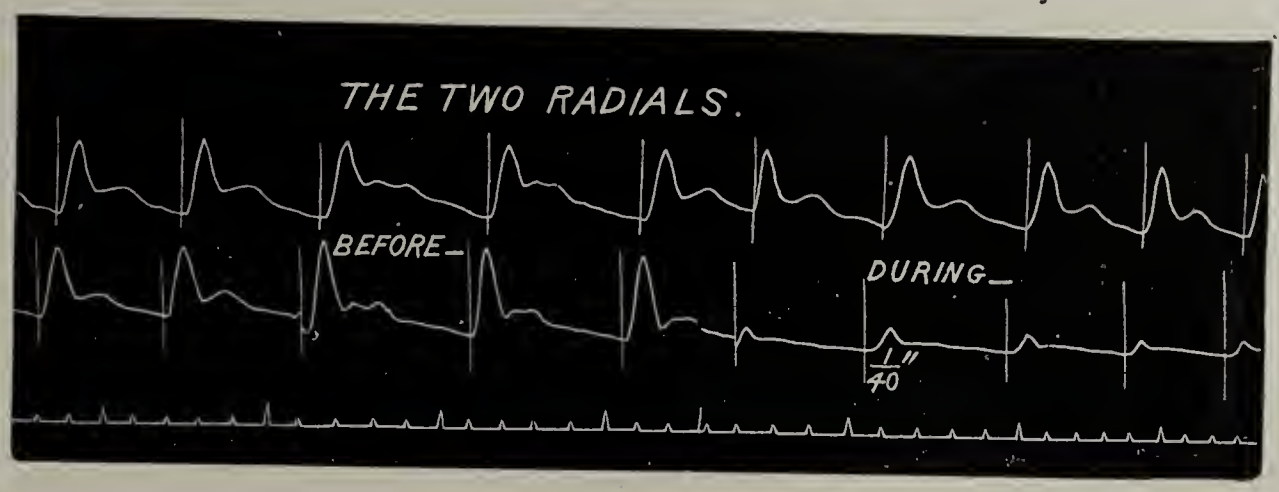


FIG. 41.

The clinical proofs of this compound proposition have been well furnished by François-Franck[1] and the author,[2] whose publications contain graphic illustrations of the points from actual cases.

From this study we deduce the following resumé of the more prominent facts:

1. The velocity of the pulse-wave is determined above all by inherent states of arterial elasticity; being slower as the arteries are more elastic.

2. It is incessantly changing, within small limits, in consequence of variation of arterial tone; being faster as the tone is higher.

3. It diminishes with the size of the artery traversed.

4. It tends to increase with increase of arterial pressure, but modification from variation of pressure often fails to manifest.

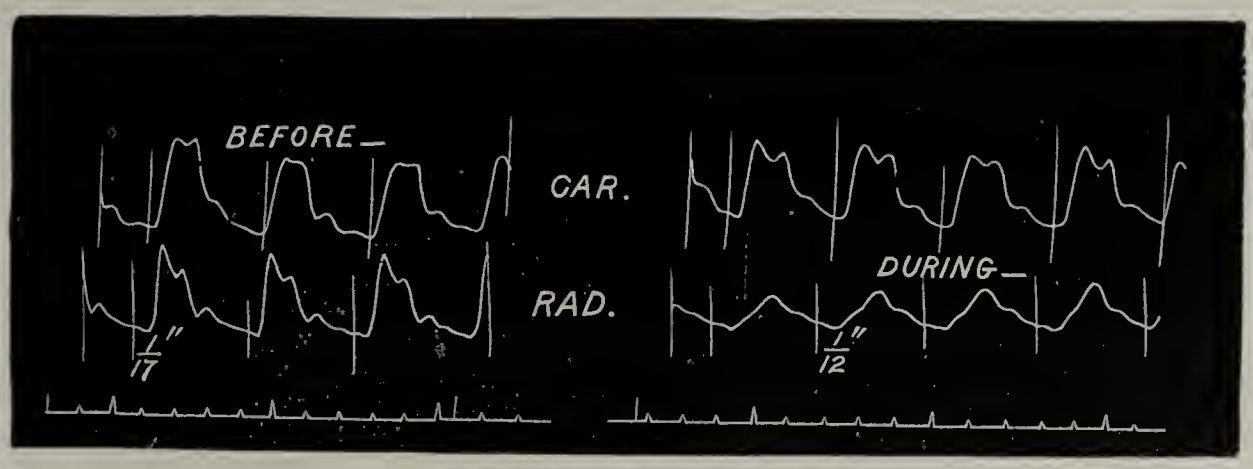


FIG. 42.

[1] New York *Medical Record*, Nov. 29, 1879.

[1] *Journ. de l'anat. et de la physiol*—t. xiv (Mars-Avril, 1878), et t. xv (1879).

[2] *N. Y. Med. Record*, Nov. 29, 1879.

5. It is not perceptibly modified below the site of an arterial obstruction, but the distal wave is delayed there in consequence of check at the site of obstruction.

6. It is not perceptibly modified in an artery below the site of an aneurism, although the distal wave may be delayed there in consequence of absorption by the yielding aneurismal walls.

THE EMINENT DOMAIN OF SANITARY SCIENCE, AND THE USEFULNESS OF STATE BOARDS OF HEALTH IN GUARDING THE PUBLIC WELFARE.

BY JAMES E. REEVES, M.D., SECRETARY OF THE STATE BOARD OF HEALTH OF WEST VIRGINIA.

[Read before the American Public Health Association at its annual meeting held at Detroit November 14, 1883.]

MR. PRESIDENT:—I propose a few inquiries into the truth of a proposition which I consider vitally important not only to the State, but to the general interest of every social institution. The proposition to which I allude may, with some convenience, perhaps, be expressed in the following terms:

Without obedience to the laws of health, it is impossible to secure the highest culture of the citizen—physical, moral and intellectual—and perpetuate the prosperity, freedom, and glory of the State.

Should I succeed in establishing the truth of this proposition, the labor of sanitarians will be more justly appreciated, as well as the immense agency exerted by State Boards of Health amid the restless activity and excitements of the social and political elements of our advancing and complex civilization.

The principles of sanitary science are not of modern origin. Indeed, they are as old as the Mosaic code, and their unerring rewards and penalties have marked the life-history of all the nations that have covered the earth. In their scope, they are wide enough to embrace all humanity, and just as applicable to communities of to-day as they were to the Jewish race thousands of years ago.

It may be truthfully said that the business of sanitary science begins and ends with man; but language has no single or compound word which fully expresses its varied relations—its social forces and necessities to human life and human society. Its aim is the growth of an improved race—a healthy life—a useful life—a happy life—and as long a life as possible. Commencing with utero-gestation, it compasses birth, infancy, childhood, adolescence, puberty, adult life, maturity; thence along the declivity to old age, and to death! Every influence of food and drinks, clothing, exercise, education, soil, and climate, comes within its purview. Good health, therefore, embraces *value* in the broadest sense of that term. On the individual it confers happiness, dignity, and a thousand advantages in the struggle of life. To the State it gives wealth, power and freedom.

Public health ever goes hand in hand with true liberty, and is the companion of orderly habits and pure morals. During the fourteenth century, when vice and misrule in Europe had their greatest sway, and the beautiful fruits of civilization were trampled under foot by barbarian warriors; when acquisitions that had cost mankind ages of toil and millions of money were lost in the general wreck; when the night of igorance was darkest, and human degradation sunk to the lowest depths—then hygiene was neglected, and plagues numerous and almost universal rested upon the people.

But this is only one of the many examples that could be adduced in proof that general health and longevity are inconsistent with ignorance and slavery. Greece, with the loss of her liberty and the ruin of her cities, has an altered climate, dating back, perhaps, from the years of the Peloponesian war—more than four hundred years before the Christian era—when polished and populous Athens was devastated by fire and sword, and plagues followed in the train to complete the horrors of her lamentable desolation and downfall!

In London, about the middle of the sixteenth century, the population was estimated at half a million, and the average duration of life was only twenty-five years—*eighty* dying annually out of every thousand of the population. The streets were narrow, scarcely paved, and equaled the imperfectly constructed sewers as receptacles of all manner of abominable filth; the dwellings, principally of wood, were overcrowded, and no attention whatever was paid to their ventilation; water was scantily supplied; personal and domicillary cleanliness were neither encouraged nor enforced; and the city was given up to licentiousness. Then, in 1665, London was visited by plague, and it is recorded that in one night three thousand persons perished from that terrible disease; and that up to 1679 the mortality from that source alone amounted to one hundred thousand! But now, with its improved sanitation, its stupendous sewers which have been recently completed at a cost of twenty millions of dollars, and its population increased to millions, how different the result! Instead of twenty-five years, the average duration of life is above thirty-seven years, and the rate of mortality, instead of fifty, is a fraction less than twenty-four in a thousand of the population.

Calcutta, built on a swamp on the east side of the Hoogly, and, at a few miles distance, surrounded by lakes which are supplied from overflows of the river, by a proper system of drainage of that part of the city inhabited by Europeans, has become as healthy as any country of the same latitude on earth; while, on the contrary, Stockholm, built on small islands at the entrance of Lake Malar, with a mean annual temperature of 40° F., and possessing the requisite natural advantages, if properly guarded and improved, to make it one of the healthiest cities in Europe, is, because of gross disregard of sanitary laws—imperfect drainage and a bad supply of water in houses—one of the *unhealthiest* in that quarter of the globe, as shown by the death-rate.

Sanitary science, therefore, is a segment of political economy, and should receive encouragement by the State as a wealth-creating factor—riches, indeed, to the whole people far above that of any other earthly value.

It has become a classic saying that "public health is public wealth;" but who can estimate it rightly? Every case of sickness and the loss of every life from preventable disease is a tax upon the material wealth of the State and a great sorrow to the family. Count the number of deaths in a community for any given period, multiply it by *thirteen*—the estimated number of sick on hand for each death—and you have the average total of sick persons cared for at an expense much greater than would have been necessary for their support in health. In addition to this estimate, let us remember that at least *one third* of all the cases of sickness and of the deaths that occur are preventable; that this suffering and continuing tax on health and life is in direct antagonism to industry and the general prosperity; that the visitation of diseases falls heaviest always on the poor and most helpless classes of the community; and that the pressure of bad health and poverty, with their far-reaching ill effects upon the growing and reproductive parts of the population, tends to deterioration of the race.

In times of epidemic visitation, all these ill influences culminate in general distress of the people. Let Asiatic cholera come, smiting the young and the old, withering the pride of manhood and the beauty of youth—in many sections marring, in others obliterating the festivities and gayeties of life, robing the social circle and the family group in the garments of grief, spreading the gloom and striking the panic of sudden death—then, for the time, possibly, the value of public health, as well as legal statutes to protect it, will be justly appreciated; for, besides the general affliction from sickness and death, the direct loss in money would probably equal in amount, during the time, the whole expenditures of the national government.

Political economists have said that the cash value of the life of an able-bodied, industrious man is sixteen hundred dollars, and that the average value of men, women, and adolescents of both sexes above twelve years of age, is one thousand dollars. Now, accepting this estimate as a fair and proper basis for calculation of the wealth stored up in the United States, we may have some conception of the real value of the earnings of the *human machine*.

Besides native wealth, our country is enriched annually from immigration. Every steamer that plows its way to our shores comes freighted with human souls, to swell the population of this country and enlarge the profits of labor. No migration of men has occurred in the world at all similar to that which has been pouring itself upon the shores of the United States for the past five years. In a single week we have again and again received into the bosom of society numbers as great as a Gothic army possessed in its ranks, and passed them away without hurt and without terror. Week after week, again and again they come—each vessel bringing frequently a thousand souls, a number greater than was borne by a fleet of many ships in the days when Greece invaded Ilium, or Xerxes, Greece.

The question of immigration is, therefore, one of grave importance to American statesmen. It involves political, moral, and social consequences of a magnitude too vast for common apprehension. Who shall assume to tell what precise result will follow in this country from the bringing together of races of men hitherto comparatively isolated? Or who shall say whether the intellectual and physical power of the Anglo-Saxon, the cool and industrious vigor of the Teuton, or the elasticity and fire of the Celt, shall be the controlling influence in the coming time? That the inferior must recede or disappear before the superior races is an inevitable result, sanctioned alike by reason, analogy, and the indisputable records of history. Nature's leaves, wherever civilization and science have unfolded them, bear the plain evidences that such has been the eternal course of her wise, although sometimes inscrutable, laws.

Let us hope that from the fusion of all these different families and different bloods there shall spring a composite race of men of far greater capacity than those who at present govern the nation—a race which shall have no jarring prejudices, and be animated by only the loftiest sentiments for the common welfare.

It is computed that by immigration our country is annually enriched $50,000,000, and with net profits of labor amounting to $65,000,000. The great Northwest is receiving the larger share of this wealth; but along with it there are some threatenings and dangers which well deserve wise attention. The immigrant brings with him not only his money, but also his habits of life and heredity. These may either be very good or very bad. If the former, then his citizenship is a substantial acquisition to the wealth of the state. If the latter, he is at once both a moral and physical leper, and of incalculable danger to society. Fortunately, however, thus far the assimilative and moral forces of our American institutions have been sufficiently active to absorb this immense immigrant mass, and convert it into strength of the nation.

But notwithstanding the seeming capability of our institutions to swallow up, easily digest, and assimilate the stream of humanity which is constantly pouring into this country from the Old World, we must not shut our eyes against the manifest and increasing tendency of this commingling of moral and social habits to greater latitude and excesses than are to be found in either of the parent countries. In other words, the demand for labor of every character, its handsome rewards, and the plenty of money, are powerful temptations to influence a departure from simple and correct habits of life, with their almost never-failing accompaniment of good health.

The popularity of the milder alcoholic beverages—ale, beer and wine—is directly due to the influence of our adopted fellow-citizens in all classes of society. I should be untrue to myself, to my position, to the medical profession, and to humanity, if I let this opportunity pass without sounding a note of warning against the intemperate use of alcoholic drinks, and to speak of their influence to debase the citizen and his progeny—physically, morally and mentally—and deny him and them good health and longevity.

The connection between drunkenness and crime, and between drunkenness and poverty, is close and unvarying in its effect upon society. The remarkable

increase of insanity in recent years may, in part, be traced to the prevalence of the intemperate use of intoxicating liquors. That wine, beer, and the stronger beverages, when taken in excess, all tend to derange the mental manifestations, is a fact too familiar to medical men to require of me argument to prove its truth. They act upon and disorder the brain more directly, perhaps, than any other organ; and, by habitual excess, may at last induce permanent impairment of the mental faculties.

In times of epidemic visitation—when pestilence is sweeping the country—the intemperate and the drunkard are the first to fall by its arrows of death; and the chances of recovery from any disease or injury whatever are infinitely less for the drunkard than for the sober man. Were man to live as he should do—*enjoying* every good gift and *abusing none*—he would (saving accidents) live to extreme old age without disease. But alas! how many such careful, prudent, temperate lives could there to-day be found in this great country of ours, where a kind Providence has made it possible for us to enjoy every blessing the whole world can afford? The denunciation by the prophet Isaiah—"*Woe to the drunkards.*" "*Woe to them that are mighty to drink wine*"—is not only in course of fulfillment every day with the drunkard, but the *curse* extends to his children yet unborn, even to the third and fourth generation, by inheritance of appetites which are far more constant and certain in their descent than patrimony.

It has been asserted that at least seven-tenths of all the crimes and poverty and calamity to the people of the United States sprang from the abuse of personal liberty in the use of spirituous, vinous and malt liquors; and, if the charge be true—either in whole or in part—it is a subject which should concern sanitarians. Vice needs every possible exposure and discouragement to prevent its seeds from growth, and the lesson should everywhere be taught that good health and long life cannot dwell in association with a poisoned mind or an upbraiding conscience.

The public-school system of the United States is the great national laboratory for shaping, refining, and directing, on a progressively higher intellectual, moral and social plane, the tendencies of American citizenship. Into its plastic mold the children from immigrant families are freely mingled with native English-speaking youth; the lessons there taught and the manners prescribed and enforced are carried to the homes of the children in every class of society to cultivate and ennoble the aspirations of parents and guardians, and combat immoral and debasiug influences which have crept into our civilization.

In the American public school system, therefore, are centered the greatest trusts and the brightest hopes for the future of the republic. It is the nursery of statesmen, philosophers, scientists, and patriots; and, being invested with such a high and mighty alliance of interests, it has become the particular care of sanitarians as the vineyard for the nurture and growth of a healthy race of men and women who shall lead the whole world in civilization. How important, then, that guardians, principals and teachers in our common schools shall be thoroughly qualified, by special training in physiology[1] and hygeine, for the discharge of the high responsibilities with which they have been clothed by the community and the State!

If the opportunity of the school-room for the dissemination of the principles of sanitary science were properly appreciated and diligently improved by teachers, it would soon come to pass that all classes of the people would pay respect and render obedience to its laws. Physiology and hygiene should receive far more attention than is now usually given these studies. At present, in many schools, they are treated as if they belonged to the *ornamental branches* of education rather than the *useful*, and are taught by *title* instead of by direct practical examples gathered from the every-day life of school-children.

In country districts school life has many more exposures to unhealthy influences than are suffered in towns and cities. For example, it is no uncommon experience for some of the children to walk two or three miles—sometimes double that distance—every day they attend school; and when the weather is wet and the roads muddy, they are frequently compelled to enter their classes with cold feet and damp clothing, and remain in that chilly, uncomfortable condition until the period of recess arrives, or, may be, until their return home in the evening. In winter time, when the roads are icy and slippery, or when the ground is covered with snow, and travel on foot most disagreeable and fatiguing, those who have long distances to walk must hurry their footsteps to escape being tardy at roll-call, and when entering their classes are all aglow and perspiring. In that condition they take their seats, soon feel chilly and are too sleepy and stupid to take interest in the lessons. At noon, when the hour for dinner arrives they eat hurriedly the cold food contained in their little baskets and buckets, but not usually with as sharp appetite and good digestion as when they are at home. Immediately after dinner they engage too vigorously in all sorts of play—running, jumping, "chasing the fox," base ball, and various other fatiguing and relaxing exercises—so that by the time of the call "to books," they are as tired and indisposed to study as when they reached school in the morning. Then after dismissal in the evening they are again tired out by the walk home, and thus they are more or less exposed to unhealthy influences every day during the school term.

The management of country schools should provide special accommodations for the relief and comfort of children who come with damp clothing and wet feet. This can be easily accomplished in a well appointed reception room for each sex, where should be kept always on hand and ready for use a sufficient number of pairs of shoes and stockings of different sizes, also several warm wraps with which to clothe and warm the tenderest of the exposed pupils until their own shoes and stockings and other garments are dry enough to put on, and they are ready to enter their classes.

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[1] Dunglison's "School Physiology" is admirably suited for use in public schools, and is, probably, the best of its class.

Parents who are able to do so should be encouraged to supply the school store room with an extra suit of clothing for each child they send, and, no doubt, in every community there could be gathered enough subscriptions of that kind from humane, well-to-do persons and families to meet the wants and needs of the poorer children at school whose wardrobes are already too scantily supplied to afford them comfort and proper protection in cold weather. Nowadays, however, rubber shoes, "gossamer" circulars, and gum coats have become so cheap and common it would seem that even the poorest families should be able to provide such articles of protection for their children.

To perfect the system I have indicated for guarding the health of school-children, and at the same time to cultivate a spirit of benevolence, there should be appointed by the principal or teacher, at the beginning of each quarter, a special committee—to be known as the *Health-Saving Service*—composed of both boys and girls selected from the older and more advanced pupils, and charged with the responsible duty of looking every day after the welfare and comfort of those who need assistance, particularly the little ones. At the close of each week this committee should be required to make formal report of its labors to the teacher or principal, naming the pupils relieved and the particular service rendered in each case. Then, at the end of the school term a handsome premium should be awarded to the pupil who has taken greatest interest in the work, or performed the largest number of acts of assistance.

All examples of exposure of health during school life should be seized by teachers and made the texts of little lectures on the principles of personal, domiciliary, and public hygiene. They should point to the danger to health from wet and cold feet, too violent exercise, sitting on the ground or in draughts when the body is warm and perspiring, excessive indulgence in eating and drinking, insufficient or improper clothing, breathing a bad atmosphere in crowded rooms—all these and every other like impropriety or transgression of the laws of health should be made as plain as simple language and apt illustration can portray them.

It should be impressed upon the attention of school-children that the diseases which kill them in the greatest numbers have been classed by wise men as Filth Diseases; that small-pox is easily preventable by vaccination; that scarlet fever, diphtheria, typhoid fever, yellow fever, cholera, and even pulmonary consumption, are preventable by cleanliness and correct habits of life; that there are farm-houses in all parts of the country, groups of houses in every community, whole villages, sections of towns, and districts in cities, where slovenliness and filth so much abound that sickness in some form is present at all seasons of the year; that filth does not only infect the atmosphere immediately surrounding its accumulation, but can and does transmit its germs afar; and thus it has again and again happened that whole families, with every apparent surrounding of cleanliness, comfort, and luxury, have sickened and died from infection received through the channel of some drain-inlet, or the medium of the common water-supply.

The more surely to fix the memory of these truths, the teacher should employ illustration on the blackboard to show dangerous proximity of the family residence, the stable and barn-yard, the pig-sty, the duck-pond, the privy-vault, and the kitchen sink-drain, to the water-supply in the well or cistern. He should also tell how the atmosphere in the house may become poisoned and breed disease from decaying vegetables stored in the cellar; how the milk supply of the family may become contaminated with filth and dangerous to drink; how dwelling-houses, workshops, and factories should be constructed to be healthy to live in and occupy; and how necessary, for the maintenance of good health, that they breathe fresh air, drink pure water, and have plenty of well-cooked, wholesome food.

Besides examples drawn from village and country life, the teacher in the city school may show, by diagrams on the blackboard, the system of sewerage usually adopted in towns and cities; the importance of *traps* to prevent the inlet of deadly gases from the public sewers through the channel of the kitchen-sink waste-pipe, the soil-pipe of the water-closet, and the overflow-pipe of the bed-room stationary wash-stand; the great danger to health from imperfect ventilation of dwelling-houses, school-rooms, theaters, churches, and public halls; the manner of the water-supply; the danger from open cess-pools; the necessity of guarding the public markets and green-groceries, to prevent the sale of tainted meats, stale vegetables, and decaying fruits; and not the least to be dreaded and shunned—public funerals from infectious and contagious diseases.

In the city there are also every-day opportunities to "point a moral" from drunkenness, and from police arrests for various offenses which disturb the peace and good order of society. Such examples should be used to show the penalties and hardships of vice, in contrast with the honorable and lasting rewards of a temperate, virtuous life. To encourage morality and the growth of true manhood, the lives of good men, in contrast with the character of bad men, should be presented for study. For example, liberty-loving Lafayette should be contrasted with that "great bad man," Mirabeau, his fellow-countryman, who had a mind of the highest order, and eloquence the most commanding and impressive, but his commentary on national liberty was personal licentiousness. A look into American history and biography will find the experience of Jefferson in proof that habits of temperance win long life and good health. Then, in English history, it may be seen that Sheridan, with all his oratory and wit, became an outcast from society—a drunken, fallen man. And Savage, and Burns, and Byron—had they not neglected and scorned the plain precepts of temperance, morality would then have had less cause to disclaim the alliance of genius; nor would vice be so readily heard uttering the base maxim that stormy passions are the necessary accompaniments of lofty intellect.

The State has made abundant provision by statute law for the intellectual training of its youth. Why not, at least, equal concern for their physical culture

and development — *mens sana in corpore sano.*

Lord Stanley declared that "sanitary studies belong to the patriot no less than the philanthropist. Don't fancy," said he, "that the mischief done by disease spreading in the community is to be measured by the number of deaths which ensue—that is the least part of the result, as, in the battle, the killed bear but a small proportion to the wounded. It is not merely by the crowded hospitals, the frequent funerals, the destitution of families, or the increased pressure of the public burdens, that you may test the sufferings of a nation over which sickness has passed; the real and lasting injury lies in the deterioration of race, in the seeds of disease transmitted to future generations, in the degeneracy and decay which are never detected till the evil is irreparable."

Lord Beaconsfield also was an active patron of sanitary science, and uttered the sentiment that "the health of the people is the first care of statesmen." Indeed, its objects rank among the most important matters now discussed by the highest intellects and most humane hearts in every civilized country. No jurist questions the right and duty of government to make and enforce laws for the protection of the public health, to secure not only as long a life as nature can give, but likewise as healthy and happy a life as possible.

The State erects imposing and costly edifices for the detention and punishment of criminals, for the education and care of the blind and deaf, and for the treatment of the insane. To support such establishments, with all their necessary appointments, hundreds of thousands of dollars are annually paid out of the public treasury, and the burden of taxation for that purpose is constantly increasing. Why not enact statutes to diminish the factors which furnish such charges to the State?

The law is singularly inconsistent in its protection and punishments. If a man commit murder, he may either be hanged or sent to the State prison for life; but preventable disease—scarlet fever, diphtheria, typhoid fever, small-pox, and other death-dealing agencies—may stealthily enter the household, kill the family, and be innocently regarded as an act of Divine Providence!

The poor pilferer in a dwelling house at midnight may be in a state of starvation at the time he lays a trembling finger on something to eat in the larder, or on a silver waiter on the side-board, but, notwithstanding the pressure and desperation of hunger, if discovered in his trespass and theft, he is sent to prison, and his family disgraced thereby; while the architect, the plumber, and, alike, the ignorant doctor, may enter in broad daylight—aye, even by *call* —and steal and destroy the life and health of the occupants.

The law makes common carriers responsible, regardless of accident, for damage done either to person or property; yet an American citizen may refuse the protection which vaccination affords against small-pox, carry that loathsome disease into a community, and start an epidemic.

If a pitfall be left in the street or public highway, and the citizen, his horse, or his ox, fall into it and is injured in any manner thereby, he may sue in a court of justice and recover from the town, city, or county, as the case may be, a sufficient sum of money to compensate for the damage sustained; but the same citizen may sicken and disable his own family, also the family of his neighbor, by accumulations of filth on his premises, and escape all legal responsibility.

Again, municipal ordinance says that, in order to avoid injury to persons and property, a locomotive engine and train of cars shall not exceed a speed of six miles per hour within the corporate limits; yet the same authority of law permits open cesspools, filthy streets and alleys, a contaminated water-supply to families, and the constant breeding of infectious and contagious diseases to kill the people.

And again, to prevent litigation and strife among her citizens, the State has even gone so far as to prescribe the very words to be used in the purchase or transfer of property by "Richard Roe" or "John Doe." Why not the same particularity and care to prevent the rise and spread of sickness among the people?

Influenced by progressive minds in the medical profession, twenty-nine States have established State boards of health, and it is surely within the bounds of truth to affirm that thereby thousands of valuable lives have been saved, also hundreds of thousands of dollars to the wealth of the States.

The American Public Health Association, backed as it is by the influence and support of the whole medical profession of the United States, is recognized as the great central agency for the dissemination of sanitary knowledge among the masses. Through its systematic efforts and wise administration of voluntary powers, a large public sentiment has already been secured in favor of health legislation; and, accordingly, it has been so done by legislators in many of the States.

I charge you, my brethren, to concentrate your energies and influence. Speak out as one man in the name of the dearest interest of God's children, who look to you—and not unavailingly—for succor in time of their distress. If the medical profession will but remain true to itself—true alike to science and humanity—the time is not far distant when its exalted influence will compel obedience of legislators to public sentiment, and cover every State with statute law for the protection of the public health. Moral suasion may do much to encourage respect for sanitary science, but it requires the strong arm of statute law, with its severe penalties for violation, to enforce obedience to its precepts.

The West Virginia statute provides that "the State Board of Health shall take cognizance of the interests of the life and health of the inhabitants of the State, and shall make, or cause to be made, sanitary investigations and inquiries respecting the causes of disease and the means of prevention." How broad the charge! and how humane and God-like the service which defends men, women and children from preventable diseases! This is precisely the service which a State Board of Health may afford—the education of the people respecting the economic and

political importance of public health; to exterminate and prevent pestilential diseases, and thus largely contribute to the general welfare.

During the last decade there has been most gratifying activity in the cultivation and diffusion of sanitary knowledge; and it is an encouraging sign of the times that so much attention is now being given by legislators to the prevention of disease as a duty of the State. The proud lead of the great Northwest States in the cultivation of sanitary science has awakened a general interest in the subject in all parts of our common country. All praise, therefore, to the industrious leaders in sanitary work in Illinois, Michigan, Wisconsin and Minnesota. Little West Virginia, nestled in the mountains, and looking into the near future for the coming time when her inexhaustible stores of native wealth shall be unlocked to hundreds of thousands of busy laborers, has proudly acknowledged allegiance to the goddess Hygeia, under whose health-inspiring banner she has already won substantial victories and benefits for the saving of her citizens. But, while flushed with the stimulus of her triumphs, she turns in sadness, and with outstretched arms and pleading voice, to her elder sisters, by whom she is immediately surrounded, Ohio, Pennsylvania, Maryland, and the dear old Mother State, and says to them, "How long, oh! how long shall the land which the Lord thy God giveth thee be the Paradise of Quacks?"

West Virginia is very proud of that feature of her State Board of Health law regulating the practice of medicine and surgery. Nothing, I am sure, could work more smoothly and consistently with the interest of the public health than its execution as a part of the duties of the Board; and I commend the example of its success to those States that have not yet taken the advanced step to secure higher medical education. This provision of the law strikes at none but those wholly incompetent to assume and discharge the sacred trust of a *physician*. Neither does it attack any so-called *school* in medicine; and the law is most reasonable and just, both to the medical profession and the general public.

From time to time laws are passed to regulate the sale of intoxicating liquors and the dispensing of poisons; to suppress lotteries and gambling houses; to prevent the carrying of concealed weapons; to restrain the sharper, the swindler, the robber, and the assassin. Why not, with like propriety, pass laws to restrain the ignorant, and the pretender in medical practice who strikes at both life and purse, who can *kill* and then invoke the power of the courts to enforce payment for his murderous service? And is it not a ridiculous contradiction to say that a street nuisance which is prejudicial to the public health shall be abated by the power of law, and then with the next breath say any man, without due qualification as a physician, may call himself "doctor" and kill his neighbor?

A lawyer, whose practice and mistakes can only affect the purse and property of his client, must undergo examination by learned judges before he can be admitted to the bar. To become a teacher in the common schools, one must pass an examination and receive a certificate of qualification before he or she can be employed. A pilot on a steamboat, before he can be admitted to the wheél, must learn every crook and bar in the channel—must know the stream so well that he can steer his craft, freighted with human life, as safely in the dark as in the light of day. But such is the inconsistency of law—such the commentary upon unlicensed personal liberty—that in many of the States any man calling himself *doctor* may swing his shingle, and, without the least restraint, prey upon the lives and property of his fellow-citizens.

The depreciated value of an American medical diploma is a reproach to the profession; and it is, therefore, high time that the conferring of degrees should be entirely divorced from the department of instruction in medical colleges. This opinion is fully warranted by my own experience as a medical examiner. Not long ago a young gentleman—a graduate of a medical college in "good standing"—came to me for registration, and, to my utter astonishment, he could not answer the question, "What is sanitary science?" Another graduate in medicine, when asked, "What is semeiology?" answered, "A description of the *spermatozoa*."

But the most shameful exhibit, involving the character of a medical college in "good standing," that has come to my knowledge, is shown in the following correspondence:

"My Dear Sir: A friend writes me that you propose attending medical lectures. I write to present the claims of ——, the medical center of the South and West—the healthiest large city in America—beyond the reach of yellow fever, etc.

"Good boarding, costing elsewhere $20 to $25, can be had here for $12 to $15 per month. Owing to our ——, railroad fare is only half rate. No school has better facilities for medical teaching than the —— Medical College. As I am allowed a certain number of beneficiaries from your State (West Virginia), I will take you as one, and charge you only $50 instead of $80. With this reduction, cheapness of board, and reduced railroad fare, you can attend one of the best schools for less money than an inferior one. Let me hear from you. Send names of other students. Yours truly, * * *"

This letter was a *tablet* copy—probably one of a hundred of the same kind sent out to catch the unwary. It came addressed (by mistake, of course) to a Wheeling physician who had already honorably finished his college course, and from him it came into my hands, as a medical college curiosity! It is without date, but its caption is freely illustrated with the name and picture of the college, and contains the names of the faculty, trustees, and "demonstrators." In order to sound the depth to which "Demonstrator" —— might be willing to descend in fishing for students, regardless of *quality* (?), a veritable medical student sent him the following letter of inquiry, with orthography and syntax specially set for the occasion:

Wheeling, W. Va., Aug. 18, 1883.

Doct——

One of mi Friends who is trying to be a Doct has got a letter from you which says your College is one

of the Best Colleges for Medical Teaching in America and that the Feas are cheaper than some other good Colleges and that sutes my circumstance for I am a very poor young man and no matter how much I may Know of Thery of Medicin I cant practice in W. Va. without a Deploma from a good College like the one you have in ——— you offerd to take mi friend for $50 dollars and you will do a poor young man a favor if you will take me at the same Rate for I have that much money I can pay you in cash as soon as I get there Mi Friend will Come with me and we can stay together at the same bording house the report is here that the yeller fever is in ——— but I am not affred of any disease for I have had the Small Pox very bad. Tell me what books I will have to studdy at your College and when me and my friend must come We come by —— I have gone through with grays anatomy and the Electric dispensary and medwifery please tell me how long I will have to stay and when I can get my Deploma and if I have to pay extra for it.

In haste Yours Respectful

————*——

And here is the prompt reply that was sent to this Wheeling student, showing that the style of his English composition was no bar to admission at ——— Medical College:

———, AUGUST 20, 1883.

Mr. ———,

MY DEAR SIR:—Your favor of the 18th to hand. I have one more special beneficiary to allow; so I will take you on the same terms as I offered your friend. Am anxious that your State should have a better representation in ——— than it has had in the past. The other information you ask is contained in the catalogue I mail herewith. If you begin your medical course this fall, you can graduate February, 1885. That is as soon as any respectable school can graduate you, unless you have already taken a course, There is no place where you can learn more medicine for the same amount of money than in ———. I came here in '77 with a very light pocketbook to study medicine, and, contrary to my expectations, I had a little left after graduating, and was given no beneficiary privilege either.

The cushioned seats for our new amphitheater have arrived from the factory. They are all numbered, so that students on matriculation reserve their seats for the ensuing session, those matriculating first having choice. If you desire a seat near the front, you had better remit me the matriculation fee ($5), leaving the balance of $45, and I will matriculate you, select the best seat possible, and mail you your matriculation ticket and number of seat, so when you arrive you will not be crowded back so far that you will be unable to see well the demonstrations and experiments.

Hoping to hear from you in a few days, I am,

Yours truly, * * *

This exhibit shows the prostitution of medical college work to base purposes at "the medical center of the South and West." I have made the blanks to hide the identity of the actors in the comedy, because this college has accepted my friend Rauch's "Minimum Requirements" for a medical college to be held in "good standing;" and, no doubt, its faculty are ready to swear by the West Virginia schedule of requirements also! So much for mere promises of reform and a higher standard!

Finally, in exerting my efforts in advocacy of the cause of sanitary progress, I should commit a serious blunder if I neglected to bespeak the assistance and co-operation of the ladies. Woman gave Massachusetts the first State Board of Health in the United States, and from that beginning—in 1869—twenty-eight States have followed the example. There is yet much work for her to do, and none can do it as well as she; and no cause possesses a stronger claim upon her sympathies and affections. As science advances, she gradually acquires her true position in the scale of social life. Of the world's inhabitants, 750,000,000 universally hold woman in a state of bondage and degradation; 250,000,000 alone allow her to approach her proper sphere by acknowledging the marriage contract, paying deference to her influence, and promoting her intellectual culture. How much had the mind of man to be cultivated before it could give expression to that sweet sentiment of Campbell! —

"And say, without our hopes, without our fears,
Without the home which plighted love endears,
Without the smile from partial beauty won,
Oh! what were man? a world without a sun."

A CASE OF PHANTOM TUMOR.

BY C. N. COOPER, M.D., BATAVIA, ILL.

Mrs. W., aged 44, and mother of four living children, consulted me about March 1, 1882, with reference to her expected confinement. She ceased menstruation the previous July, but having a slight show in September, since which time there had been no sign of menstruation. She is the subject of extreme prolapsus uteri, which for two years has caused the os to present at the vulva whenever she is upon her feet for a considerable time. This condition still exists. Mrs. W. is confident that she is pregnant, for she has felt motion for nearly three months, and her breasts have enlarged, appear lively and contain a fluid resembling thin breast milk. Her abdomen is not as large as usual at this period of gestation, and sometimes becomes quite small for her. At other times the distension appears to be mostly on one side—always the left. I informed the patient that she was probably somewhat mistaken as to the time of her confinement. I thought it quite possible that her menstrual crisis was upon her, as she informed me that for a year previous to her supposed pregnancy she had been quite irregular as to time, often going six or eight weeks. She expected to be confined about the last of April, but the time came and went with no change in her condition. During the last week of May, by request, I made a thorough examination to ascertain if possible her true condition. The breasts were full, elastic and contained milk. The abdomen was considerably distended, covered with 1½ inches of fat, and as resonant as could be expected in the unimpregnated state. The left half was more distended and resonant

than the right. I found no indication of a tumor of any kind except the distension of the left half of the abdomen, but palpation gave absolutely negative results. I could discover neither fœtal heart nor placental souffle with stethoscope. The cervix uteri was thick, long and elastic. The body of the uterus seemed large, but with two fingers in the vagina I could not force it up so as to be felt above the pubis. I did not introduce a probe, thinking it barely possible that a recent pregnancy might exist. My diagnosis was phantom tumor, though I could not persuade my patient that she was not pregnant.

I saw the patient again during the first week in July, when she informed me that although she had previously been mistaken, she was sure the motion she now felt was that of a child, for it was very strong and perfectly natural, except that she seldom if ever felt it when lying down. This was ominous, but she confidently fixed the time of her confinement at the first week in September. Indeed, her size and every other subjective symptom seemed to bear her out in her idea, yet I did not change my diagnosis. During August she suffered much from neuralgia in her sides and back. Her urine became scant, and her feet and limbs quite œdematous. I prescribed the potassium salts of br. iod. and acet., also citrate of iron and quinine. This treatment gave her marked relief, yet she was becoming very nervous. On the night of Sept. 2d I was called in some haste, and found her in apparent labor. Her pains were severe and expulsive, constraining her to pull with considerable force upon her husband's hands. She said her "water broke" early in the afternoon, after a ride of five miles over a somewhat rough road, and was still discharging during some of the pains, which were now coming about every five minutes. So natural was the appéarance of the labor that I felt with some chagrin that I was the mistaken party, and that, whatever might be the period of pregnancy, it was about to terminate. Upon examination, however, I found the external parts moist, but not at all relaxed. There was no dilatation of the os, and the cervix was as long and firm as when I examined in May. The uterus was also apparently unchanged, and not at all affected by her pains, though the contraction of the abdominal muscles was very strong. I at once put ¼ grain of morphine into her arm, and gave her 10 grains of pot. br. and 4 drops of tr. gelseminum. In a few moments her pain all ceased and she became as flat as she had been since the birth of her last child. By palpation I satisfied both myself and her that she had no tumor of any kind. I prepared her a mixture of pot. br. and gel. tr., to be given occasionally until my return, and left her sleeping quietly. On the following day I found her very comfortable, but weak. I directed her to resume her tonic mixture and remain quiet for a week. Within a month she had regained her strength and resumed her household duties. Her breasts had shrunk away to their natural size, and there was no return of any of the indications which had so long existed.

During the first week in October her menses reappeared, and she has since been more regular than at any previous time since the birth of her youngest child, who is now over four years old. I cannot think that this could have been a case of uterine hydatids. The uterus could at no time be felt above the pubis. The great thickness of fat rendered the examination quite difficult, yet I am confident that the abdomen did not at any time contain a tumor with either solid or fluid contents. What the patient supposed to be amniotic fluid was doubtless free limpid urine, unconsciously ejected by the abdominal contractions. In other nervous affections patients often pass large quantities of limpid, odorless urine. Had there been a cyst of any kind accidentally ruptured, it would doubtless have refilled. That she should have mistaken intestinal flatus and muscular twitching for fœtal movements is not strange when she supposed herself pregnant. The same strong mental impression, doubtless, caused the menstrual suppression. It is well known that girls who have been indiscreet and imagine themselves pregnant, sometimes cease to menstruate until they have become satisfied of their mistake. In view of all the facts in the case, I am convinced that I was correct in my first diagnosis. I attribute the abrupt and final termination of the case to the strong mental impression received in the supposed labor, supplemented, perhaps, by the profound influence of the anodynes given at the time.

Batavia, Ill., Oct. 18, 1883.

MEDICAL PROGRESS.

MEDICINE.

Motor Localization in the Cerebral Cortex of Man.—M. M. Charcot and Pitres (*Revue de Médicine*) have just completed a critical and clinical study of this doctrine and have passed in review, in greater or less detail, 185 cases, of which 36 cases, gathered from various sources appeared to be contradictory to the general application of the doctrine, and which have led them to the following conclusions:

1st. All the cortical lesions of the cerebral hemispheres in man do not cause interference with voluntary motion, and consequently the cortex of the brain should be divided into two distinct portions, the *non-motor zone*, where destructive lesions never produce permanent paralysis, and the *motor zone*, where destructive lesions always produce permanent paralysis in the opposite side of the body.

2d The non-motor zone comprises:

(*a.*) The whole of the prefrontal region of the brain (orbital lobe, first, second and third frontal convolutions).

(*b.*) The whole of the occipito-parietal region (occipital lobe, superior and inferior parietal lobes).

(*c.*) The whole of the temporo-sphenoidal lobe.

3d. The motor zone comprises only the frontal and ascending parietal convolutions, and the paracentral lobule.

4th. The paralyses induced by destructive lesions of the cortex take on different clinical forms according to the seat and extent of the lesion. Total hemiplegias of cortical origin are produced by extensive lesions of the ascending convolutions. Partial paral-

yses are produced by limited lesions of the same convolutions.

Among these partial or monoplezic paralyses we can distinguish:

(*a.*) The brachio facial monoplegias, which coincide with lesions of the inferior portion of the ascending convolutions.

(*b.*) The brachio-crural monoplegias, which coincide with lesions of the superior portion of the ascending convolutions.

(*c.*) The facial and lingual monoplegias, which depend upon very limited lesions of the inferior extremity of the motor zone, and particularly upon the ascending frontal.

(*d.*) The brachial monoplegias, which depend upon very limited lesions of the middle portion of the motor zone, and particularly of the middle third of the ascending frontal.

(*e.*) The crural monoplegias, which depend upon very limited lesions of the paracentral lobule.

5th. Whether they are total or partial, the paralyses produced by destructive lesions of the cortex are permanent paralyses, which are accompanied after the lapse of a certain time by secondary contractions of the paralyzed muscles and by descending degenerations of the pyramidal fasciculi.

6th. The irritative lesions of the cortex may give rise to epileptiform convulsions (partial epilepsy, Jacksonian or cortical). These convulsions are ordinarily very readily distinguished from the convulsions of true epilepsy. They commence by a motor aura, and may become general or remain limited to a portion of the body (hemispasm), or to a single muscular group (monospasm).

7th. Generally, the lesions that are susceptible of provoking epileptiform convulsions are seated in the neighborhood of the cortical region, the destruction of which coincides with the paralysis of the muscular groups primarily convulsed at the onset of the attack. They may be situated either on the motor zone itself, or on the non-motor zone, and there is not a constant relation between the form of partial epilepsy and the topography of its irritating cortical lesion, as does exist between paralyses of cortical origin and the seat of the destructive lesions that give rise to them.

8th. The history of motor localizations in man is founded actually upon the comparison of many corresponding cases, regularly collected, and confirmed, for the most part, by all the desirable guaranties. None of the cases opposed to the doctrine of localizations can stand serious criticism. There does not exist a single demonstrative contradictory observation. The observations which are given as such all fail without exception, either because they relate to complex cases (multiple and diffuse lesions, tumors), or because they are not accompanied by sufficient details.

THE SUB-UNGUEAL PULSE.—Dr. Henri Gripat in 1873 noted a case of sub-ungueal pulse, which is considered as the first time that this phenomenon has been observed. Dr. Gripat tells us (*La France Médicale*) that he has never been able since to observe a second case, but he gives the notes of the case cited. It occurred in a young patient suffering from rheumatism of long standing, having an old aortic insufficiency, with hypertrophy and anæmia, during an attack of subacute rheumatism. The pulse was regular, bounding, depressible; and could readily be seen in the arteries of middle size, as the temporal, radial, tibial and collaterals of the fingers. On raising the fingers a little, while the hand remained flat on the bed, the blood could be seen passing briskly under the nail and coloring it red; this color disappeared almost immediately and the nail became white in its center, remaining red only at its periphery. The coloration was transient, intermittent, pulsatile and systolic.

SURGERY.

CASTRATION OF TUBERCULAR TESTICLES.—M. Ch. Monod (*Le Progrés Médical*), having three cases of tubercles of the testicle in the Hospital Necker, discusses, in his clinic, the question of the propriety of castration. He defines the disease as presenting itself habitually in the form of a subacute epididymitis, ordinarily bilateral, without tendency to spontaneous cure, and going on, after a longer or shorter period, to suppuration. When an epididymitis appears without appreciable cause, without blenorrhagia, without traumatism, the question of tubercle arises, which becomes more prominent when that epididymitis resists all treatment, and when a limited suppuration sets in without warning at some one point of the organ, and opens spontaneously, the diagnosis is complete. The local phenomena are not always so clearly defined, and it is indispensable that we examine the annexes of the testicle, practicing the rectal touch to determine the condition of the prostate and of the vesiculæ seminales, and examining the spermatic cord. Generally, there is an induration of the prostate, with a greater or less enlargement, being sometimes unilateral and sometimes bilateral. If the prostate be found healthy, we nevertheless penetrate further into the rectum, to examine the vesiculæ seminales. In young subjects, where these parts are in a healthy condition, they are not readily felt; where they are felt, in a case affected with induration of the testicle, it must be admitted that these organs are enlarged, and probably already the seat of tubercular lesion. The examination of the cord shows a tumefaction of the vas deferens, or, when further advanced, a nodular feel, and a more or less marked monoliform condition.

Recognizing the unity of tuberculosis and an elementary lesion which could be removed by extirpation, and thus possibly prevent a general contamination of the organism, M. Monod advised castration, thus following Prof. Trelat in his views that the suppression of the primitive tuberculous focus was imperative whenever ablation was possible. His answers to objections to this course are, in effect, that as the disease penetrates by one point in the economy, it is not irrational to admit that it is possible to arrest it in its evolution, if it is attacked at its first stage. M. Ch. Nelaton has cited in his thesis, two cases where, after this operation, the patients remained ab-

solutely cured, without the lungs ever becoming affected. The researches of Cadeau, of Martin (of Geneva), of Prof. Richet, and others, have shown that evident pulmonary lesions have retrograded, and, in certain cases, disappeared completely, after the surgical treatment of a local tuberculosis. Prof. Verneuil considers that traumatism, in a tubercular case, gives a stimulus to the preëxisting diathesis and hastens death, either by aggravating a pulmonary lesion which, up to that time, was latent, or in causing a development of tubercular meningitis or of general miliary tubercle. Such operations as the cleansing of old abscesses are particularly objectionable, for, in opening the numerous vessels, they may give rise to a veritable auto-inoculation of the disease; to a direct penetration of the parasite of tuberculosis into the organism. M. Verneuil, however, recognizes that there are cases where these complications have not been produced, and does not conclude that it is necessary to abstain from all operations on tubercular subjects, but that a restraint must be put upon the indications for operative interference. To sum up, tubercle of the testicle is not one of those lesions which we should despair of relieving too readily. To the general treatment, recently enriched by new resources, we have joined, under certain reserves, a more active remedy—ablation of the organ itself; thus suppressing the local disease and its consequences.

Death from the Presence of a Foreign Body in the Œsophagus, not Detected by Catheterism.—M. Lesbros (*Archio de Méd. et de Pharm. Mil.*) gives the case of a soldier who died suddenly from asphyxia after partaking of food. In the attempts to relieve him, instruments were passed down the œsophagus into the stomach, bringing up chymified alimentary substances, but not detecting the presence of the foreign body. The autopsy revealed a thick piece mostly of aponeurotic tissue, and of such a consistency as not to mold itself to the tube containing it. It was 55 grammes in weight, 8 centimeters broad and 2 thick. In shape, like the three middle fingers pressed together, it lay on a level with the junction of the trachea with the larynx, distending the œsophagus enormously, and extending some distance up into the pharyngeal space. To account for the failures to recognize its presence, the constrictors of the pharynx in attempting to pass it downwards, must have folded its surfaces so as to form a groove of which the convexity lay against the membranous wall of the trachea, and it was through this groove that the instrument passed.

Suture of the Bladder.—Prof. G. G. Jolliard, of Geneva, (*Revue Mèdicale de la Souisse Romande*) in operating for ovariotomy tore the bladder, which was adherent to the tumor, transversely 12 centimeters long. He applied the suture of Lambert, taking care not to penetrate the mucous membrane with his catgut thread, so as to prevent its contact with the urine (as in the American suture for vesico-vaginal fistula). He took care to turn back the serous membrane for about one centimeter from the two angles of the wound, having noticed that the vesical fluid in the case of experimental sutures generally drained itself through the angles of the wound.

After completing the operation, Prof. Jolliard placed a sound in the bladder which remained there six days to prevent any accumulation of urine or contraction of the bladder. After the seventh day, catheterism was less and less frequently performed, until toward the third week there was a complete cure of and return to the functions of the bladder.

The patient died six months after the operation of carcinoma of the liver, and Prof. Jolliard found at the autopsy, on the posterior wall of the bladder, the cicatrix, looking like a pearlish white line; the bladder was perfectly supple and normal, and there were no traces of the catguts by which the suture was made.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

Poisonous Fishes.—Eleven cases of poisoning are detailed, of varying severity, some followed by death, and that very soon after the ingestion of the poison. The symptoms of slight poisoning were mainly referable to the nervous system—muscular weakness; tendency to fainting; numbness; affection of vision, of tactile sensibility, and of the muscular sense, which persisted for several days, even for a week. The symptoms of rapid poisoning were an exaggeration of the foregoing, added to which were nausea, gastralgia, abundant biliary and glairy vomiting; death occurring by the progress of a paralysis which attacked the heart and respiratory organs. As the symptoms of instant poisoning, in from ten to twenty-five minutes the subject falls as if suddenly struck down, and loses consciousness, which does not return, although he may live several minutes. The heart loses its force of contraction, and asphyxia is rapid, but no vomiting ensues. In view of the preceding, the writer comes to the following conclusions:

The poison of the genital organs of the tetrodons is a poison paralyzing the nervous centers, which act more or less markedly upon general and special sensibility and upon motility, and cause death by paralysis of the heart and asphyxia.

Poisoning from Handling the Vanilla Bean.—M. le Dr. Sayet gives an interesting communication to the Congress at Rouen on this subject, which is quoted by Dr. Genervix, in *La France Médicale*. The vanilla, as we know, is a fruit with its pod, that is smooth, of a brownish-black color, and contains a thick pulp, in which are scattered little globular grains. There are three varieties, according to the quality and size—the *primiera*, where the pod is 24 centimeters long, the *chica prima;* and the *basura*, where the pod is very small and the pulp is very fat. The vanilla owes its perfume to a volatile oil which crystallizes on the surface of the pod as white needles, which constitute the *givre*. The abundance of *givre* characterizes good vanilla, and the pods are enveloped in some fatty substance like the oil of cacao, to prevent the dissemination of these crystals.

M. le Dr. Sayet, having had occasion to inspect the storehouses of the city of Bordeaux, where at least twenty-five to thirty thousand kilogrammes of

vanilla enter the port every year, noted certain symptoms which, grouped together, constitute "*vanillism.*" In these places, the pods are cleansed, picked over, and classified according to their quality; and these manipulations produce the following symptoms among those conducting the work:

An itching of the face and hands, accompanied with a brisk smarting; the skin is covered with a pruriginous eruption, swells, reddens, and desquamates in a few days. At other times there is a sense of general discomfort, with dizziness, weariness, and muscular pains, which necessitate a suspension of work. The cutaneous affection is caused by an acarus, which has a small, white body, rounded, and found generally at the extremities of the pod. It does not penetrate beneath the skin, but produces prurigo by contact, and its action is increased by the influence of the givre, an irritating substance which aids in the development of the erythema. The nervous affections are most common among the workers of the inferior quality, and may be due to the oily juice which envelopes the grains in the interior of the husk.

OBSTETRICS AND GYNÆCOLOGY.

CONCEPTION DURING AMENORRHŒA.—Dr. Andrè Petit (*Annales de Gynecologie*) after detailing carefully some twenty-four cases, arrives at the following conclusions:

1st. If, in the adult woman of normal constitution, there is no menstrual discharge in the absence of the ovaries or of the physiological action of these organs, ovulation, on the contrary, can take place in certain cases without the discharge of blood which is the external phenomenon of menstruation.

2d. The cases cited do not furnish an argument in favor of the theory of *disjunction* between ovulation and menstruation. The latter, normally dependent upon ovulation, may sometimes be at fault, when there exists in the woman a local or general cause, which makes it impossible for the uterus to furnish the elements of a hæmorrhage under the exciting influence of the ovary.

3d. Amenorrhœa under these circumstances is not an indication of sterility. There exists a large number of cases of pregnancy occurring during amenorrhœa.

4th. The physician should seek with the greatest care the cause of the amenorrhœa, to be able to declare understandingly regarding the aptitude for marriage and fecundation of young girls suffering from this affection.

GARTNER'S DUCTS IN WOMEN.—Dr. J. Kocks, of Bonn, (*Archiv für Gynäkologie*) finds the remains of Gartner's ducts opening close to the posterior margin of the meatus urinarius. A probe of one millimeter in thickness can be passed into them for a distance of from half a centimeter to two centimeters. The openings are generally to be found at the summit of the little lips of mucous membrane which bound the posterior part of the meatus to right and left. Dr. Kocks regards them as the homologues of the ejaculatory ducts in the male. Prof. Böhm finds them sometimes taking on diseased action, when they may simulate gonorrhœa. Unless diagnosticated by everting the margins of the meatus, and pencilling the orifices of the ducts with solid nitrate of silver, this affection may prove obstinate.

DR. OLIVERS'S URINARY TEST PAPERS.—(*British Medical Journal*). These papers are of various kinds, some simple and others compound. The sugar test depends upon the well-known property of indigo-carmine being converted into indigo-white in the presence of certain organic matters. Indigotine, the coloring matter extracted from commercial indigo, when brought in contact with oxidisable animal matter in the presence of alkalies takes up hydrogen and is converted into indigo-white, which, in its turn, under the influence of oxygen, is capable of reconversion into indigotine. Dr. Oliver has saturated filtering paper with a solution of carmine of indigo, sulpho-indigolate of sodium, a substance which on being heated with carbonate of soda in a solution of glucose or saccharine urine, becomes first green, then red, and finally yellow. The paper is cut into slips about an inch in length and a quarter of an inch in breadth, and these are put up into little boxes with corresponding slips saturated with carbonate of soda. The practical application of the test is very simple. One of the indigo-carmine and one of the carbonate of soda papers are dropped into a test-tube and covered with water. A drop of the suspected urine is then added, and the whole is boiled up together over the flame of a candle or spirit-lamp. The color of the indigo-carmine is dissolved out of the paper; and then, if sugar be present, the solution becomes first green, then red, and finally yellow or colorless. On allowing the urine to cool, it absorbs oxygen, and the color is gradually restored. The indigo reaction is given by every form of carbo-hydrate, whilst the copper test is not reduced by all forms of sugar. This, in some cases, will be an advantage, whilst in others it will be found disadvantageous.

The test for albumen is, if possible, still more simple. A little of the suspected urine is poured into a test-tube, and a potassio-mercuric iodide and a citric acid paper are added, when, if albumen be present, a white precipitate almost immediately falls to the bottom of the tube. This test is undoubtedly very delicate, and in one case we obtained the reaction when cold nitric acid gave no precipitate until some minutes later.

THE TELEGRAPH IN MEDICAL JOURNALISM.—The *British Medical Journal*, while complimenting our own *Medical Record*, of New York, upon its journalistic enterprise in providing its readers with telegraphic summaries by cable of the daily proceedings of the British Medical Association during its Liverpool session, shows that it, the *British Medical Journal*, took precedence in this use of the cable, by thus obtaining reports of the progress of cholera in Egypt from eminent medical authorities in Cairo and Alexandria, which were far more extended and elaborate than the reports cabled to the *Medical Record*. We are moving on.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, DECEMBER 1, 1883.

PREPARATIONS OF THE COMMITTEE OF ARRANGEMENTS FOR THE NEXT ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—It will be seen by the anouncement below that the Committee of Arrangements has commenced its work by appointing a sub-committee on essays and papers intended for presentation in the several Sections of the American Medical Association at its coming meeting in Washington, May, 1884. This is a step in the right direction, and at the right time; and the sub-committee is composed of men well qualified for the duties assigned to them. Now, during the colder part of the year, and while the evenings are long, let those members of the Association who intend to present reports, papers or essays on any subject commence their work at once, and push it to completion in ample time to place it, or an abstract of it, in the hands of the chairman of the sub-committee before the first of April, as required by the by-laws given below.

Notify the committee now of what you intend to do, and then carry out your intentions without delay. It is an old saying that procrastination is the thief of time; and we doubt whether all the other thieves combined ever stole half as much in actual value as this one. Let every member who has anything valuable to communicate feel free to offer it, and not assume that there will be so many others prepared as to leave no time for him.

We are confident that the next meeting will be one of the largest and most important in the history of the Association. And if the members will promptly comply with the suggestions of the sub-committee, the programme of work will be more complete, and the results both in social enjoyment and scientific progress more valuable than have been attained at any previous meeting. The circular of the sub-committee is as follows:

WASHINGTON, D. C.

To the Members of the American Medical Association:—

"The undersigned have been appointed by the Committee of Arrangements a sub-committee on Essays.

"It will be the duty of this sub-committee to solicit essays for presentation to the several Sections of the Association at the meeting to be held in this city in May, 1884, to arrange and classify such essays, distribute them to the appropriate Sections, and to prepare, for the convenience of members and essayists, a programme of the papers assigned to the respective Sections.

"The Committee requests those members who may wish or intend to present papers at the next meeting to communicate, as soon as convenient, the full title of their papers.

"It is also desirable that the Committee should be supplied with an approximate estimate of the time to be consumed with the reading of each paper, and an intimation of the day of the session on which its presentation would be most convenient to the author.

"It may not be possible for the Committe to arrange the programme to the entire satisfaction of every contributor, but if the necessary information is supplied in time, it will be enabled to accomplish much towards such an arrangement.

"The Committee hope the publication of its objects and purposes will be sufficient to command the attention of the members of the Association, and that voluntary offers of essays will obviate the necessity of personal solicitations.

"The weekly issues of the journal of the Association present such advantages for the early publication of the scientific work of the Sections, that authors and investigators will find the Sections the best medium through which to communicate with the profession at large. The knowledge of this fact should be a sufficient incentive to induce such response to the requests of the Committee as will enable it to advance the scientific work of the Sections beyond that of any of the previous sessions.

"Contributors are assured that the Committee will make the most diligent effort to promote the scientific interest of the Association, and to that end solicits the co-operation and active support of the members and delegates.

"All communications relating to essays should be addressed to the Chairman, or some member of this Sub-Committee, at Washington, D. C.

Sub-Committee on Essays, { SAMUEL C. BUSEY, M.D. / W. W. JOHNSTON, M.D. / SWAN M. BURNETT, M.D. / S. O. RICHEY, M.D. / WILLIAM LEE, M.D.

"Approved and ordered to be published in the journal of the Association, by the Committee of Arrangements.

"ALEX. T. P. GARNETT, M.D.,
"Chairman Committee of Arrangements."

Extracts from the "Plan of Organization and Regulations Concerning the Presentation and Reading of Essays":

"The Committee of Arrangements * * * shall receive and announce all essays and memoirs voluntarily communicated, either by members of the Association or by others through them, and determine the order in which such papers are to be read and considered."

"It shall be the duty of every member of the Association who proposes to present a paper or report to any one of the Sections, to forward either the paper, or a *title* indicative of its contents, and its *length*, to the Chairman of the Committee of Arrangements, at least one month before the annual meeting at which the paper or report is to be read. It shall also be the duty of the Chairman and Secretary of each Section to communicate the same information to the Chairman of the Committee of Arrangements concerning such papers and reports as may come into their possession or knowledge, for their respective Sections, the same length of time before the annual meeting. And the Committee of Arrangements shall determine the order of reading or presentation of all such papers, and announce the same in the form of a programme, for the use of all members attending the annual meeting."

"No paper shall be read before either of the Sections, the reading of which occupies more than twenty minutes."

"*Resolved*, That no report or other paper shall be presented to this Association, unless it be so prepared that it can be put at once into the hands of the Permanent Secretary, to be transmitted to the Committee of Publication." (Vide *Transactions*, Vol. xvii., p. 27.)

THE AMERICAN PUBLIC HEALTH ASSOCIATION.—The eleventh annual meeting of this important organization was convened in Merrill Hall, Detroit, Michigan, November 13, 1883. The number in attendance was less than at several previous meetings. At 11 o'clock A. M., the meeting was called to order by the President, Ezra M. Hunt, M.D., of New Jersey. A considerable number of new members were elected.

The Treasurer, J. Berrian Lindsley, of Nashville, Tenn., reported receipts to the amount of $4,257.23, and disbursements to the amount of $2,928,98. The first paper read was on "Cattle Fever," by D. E. Salmon, D.V.S., of the Department of Agriculture, Washington, D. C. The writer gave at considerable length the history of the disease, more familiarly known as Texas cattle fever. He discussed also its nature and treatment.

The next paper was on "Hog Cholera," or the swine plague, by J. M. Partridge, M.D., of South Bend, Ind., which contained an interesting history of the disease in this country, and a summary of what has been determined concerning its nature, and the means for its prevention.

The Secretary read an interesting paper by W. T. Belfield, M.D., of Chicago, giving the results of recent investigations concerning the nature of the disease known as the "swellhead" in cattle.

During the afternoon session, Surgeon George M. Sternberg, U. S. Army, read an interesting paper on "The Causes and Nature of Malaria"—the supposed efficient cause of periodical fevers. He claimed that there were strong reasons in support of the doctrine that malarial fevers are caused by a "bacillus malariæ;" but admitted that they were not conclusive.

A. L. Gihon, M.D., U. S. Navy, read a paper by Surgeon Alfred A. Woodhull, upon the "Ætiological Association of Organic Matter with Malaria." The object of the writer appears to have been, to show that the old doctrine of the presence of organic decomposition as an essential element or factor in the production of malarious fevers, should not be abandoned. And he sustained this position by many interesting and important facts.

Surgeon Charles Smart, U. S. Army, followed with a third paper on the important subject of Malaria, in which he still further sustained the doctrine that malaria is essentially generated in moist soils containing organic matter, and is soluble in the subsoil water, and contaminates the drinking water as well as the atmosphere.

The evening of the first day was occupied with public addresses. Those of welcome by Governor Begole and Drs. Wm. Brodie and John Avery, were complimentary and appropriate for the occasion, but not of special scientific importance. The address of

the President, Dr. Ezra M. Hunt, was long, but interesting throughout. It contained a history of the origin and progress of the Public Health Association, and much relating to the progress of sanitary science, with suggestions for future work.

On the morning of the second day, a fourth paper on "Changes in the Types of Malarial Fever in Sumpter County, Alabama, from 1833 to 1883" was read by Dr. R. D. Webb, of Livingstone, Alabama. This was followed by a general discussion of the subject of malaria by several members, and which occupied nearly all the morning session. During the afternoon session papers were read on "Food Supply," by Dr. W. B. Newton, of Patterson, N. J.; on "Vital Statistics," by A. L. Gihon, U. S. Navy; on "The Adulteration of Food," by A. R. Leeds, PH.D., of Hoboken, N. J.; on "Yellow Fever," by Dr. R. B. S. Hargis, of Pensacola, Florida; on "School Hygiene," by Dr. Charles J. Lundy, of Detroit; on "Physical Culture," by Prof. D. A. Sargent, of Cambridge, Mass.; and on "The Eminent Domain of Sanitary Science, etc.," by Dr. James E. Reeves, of Wheeling, W. Va. This last paper may be found in full in the present number of the JOURNAL. The evening session was occupied by the reading of an interesting paper on "The Increase of Insanity in the United States; Its Causes and Sources," by Dr. Foster Pratt, of Kalamazoo, Michigan. Most of the papers whose titles have been given were well prepared, and contained facts and statements of much importance, but their number precluded any considerable discussion.

The morning of the third day was mostly occupied in the transaction of miscellaneous business and the election of officers for the ensuing year. Two papers were presented and read, however; one on "The Removal of Decomposable Materials from Households," by Dr. Rudolph Hering, of New York; and the other on "The Overhead Ventilation of Sewers," by Dr. Wm. Oldright, of Ontario, Canada.

The afternoon session was opened by the reading of a paper on "The Sanitary Care of Households," by Dr. Joseph H. Raymond, of Brooklyn, N. Y., which was followed by an interesting discussion. Then followed the reading of papers on "Pullman, from a State Medicine Point of View," by Dr. O. C. DeWolf, of Chicago; and on "The Restriction of Small-pox," by Dr. J. N. McCormack, of Bowling Green, Ky. Several additional papers were read by their titles only.

In the evening the Association was addressed on the subject of "Sane Humanity," by Bishop Thompson, of Mississippi, after which the usual complimentary resolutions were adopted and the Association adjourned. The following are the officers elected for the ensuing year:

President—Albert L. Gihon, Washington, D. C.

First Vice-President—James E. Reeves, Wheeling, W. Va.

Second Vice-President—Erastus Brooks, New York.

Secretary—Irving A. Watson, Concord, N. H.

Treasurer—J. B. Lindsley, Nashville, Tenn.

From the foregoing sketch of the meeting at Detroit it will be seen that much work was done in a short time, the real value of which cannot be determined until the papers are published in full in the volume of Transactions, which, if we wait the usual period, will be an uncertain time in the future.

We see no good reason why this Association continues to have its regular annual meetings a few weeks after the commencement of the annual courses of instruction in the medical colleges throughout the country. There are certainly some among the eminent members of the profession engaged in the medical schools who are interested in the subjects which engage the attention of the Association. But they cannot, in justice to the classes they are engaged to teach, devote a week to attendance during the college terms.

NEWS ITEMS.

THE ANNUAL REPORT OF THE SURGEON GENERAL'S OFFICE, U. S. ARMY.—As so much of the work done in the Surgeon General's office has come to be of vital importance to the general profession, in the maintenance and preservation of the museum, in the growth and accessibility of the library, and especially in the continued publication of the *Index Catalogue*, a notice of Volume 4 of which recently appeared in the columns of this journal; that it is advisable for the civil practitioner to so keep himself posted upon the views and recommendations presented annually to Congress by that office for its further advancement, that he may use his influence in his individual capacity, and as a member of influential societies, to govern the tone of Congress for the good of the profession. With this object prominently in view, we reprint from the daily press—(*Army and Navy Register*)—the following:

The report of the Surgeon General of the army for the fiscal year ending June 30, 1883, bears no signature, but is submitted to the Secretary of War with the following indorsement by the acting surgeon general, D. L. Huntington: "The foregoing annual report of the finances and general transactions of the office of the Surgeon General, U. S. Army, was prepared and completed by the late Surgeon General Charles H. Crane previous to his death. It is respect-

fully submitted without his signature to the honorable the Secretary of War."

The balance for the medical and hospital department on hand June 30, 1883, was $44,821.39, but this sum was covered by previous contracts and obligations, and the greater part of it has since been expended. The balance out of the appropriation for artificial limbs was $26,330.06. Of the appropriation for appliances for disabled soldiers $1,778.75 remained. The balance out of the medical and surgical history fund was $8,534.65. Out of the appropriation of $10,000 for museum and library, $2,094.55 remained on hand at the close of the fiscal year. It is recommended that a truss shall be furnished to every one who is ruptured in the line of his duty while serving in the army or navy.

The report states that the cost of supplies for the current fiscal year will exceed the amount expended last year, and it is recommended that Congress be asked to appropriate $250,000 for that purpose. The monthly report of sick and wounded received at the surgeon general's office represent for the year an average mean strength of $20,914 white, 2,390 colored troops and 208 Indian scouts. Among the white troops the total number of cases of all kinds taken on the sick list was 37,697, being at the rate of 1,802 per 1,000 of mean strength, an increase of 123 cases per 1,000 over the number reported for the previous year. The total number of deaths among the white troops was 214, or 10 per 1,000 of mean strength. The total number of white soldiers discharged the service for disability was 879, or 42 per 1,000 of mean strength. Among the colored troops the total number of cases reported was 4,689, or 1,962 per 1,000 of mean strength, an increase of 152 per 1,000 over the rate reported for the previous year. The total number of deaths was 26, or 11 per 1,000 of mean strength. The total number discharged for disability was 101, or 42 per 1,000 of mean strength. The total number of cases reported among Indian scouts was 44, being at the rate 212 per 1,000 of mean strength. The total number of deaths was 2.

Diseases of the respiratory organs stand first in numerical importance, of which about 64 per cent. are catarrhs of the upper air passages. Extremes of variation in temperature will account in part for the frequency of these diseases, but to a larger extent insufficient ventilation of barracks and dormitories, as well as irregular and unequal distribution of artificial heat during cold weather, must be held responsible.

Wounds, injuries and accidents stand second on the list of causes impairing the effectiveness of the Army. The large number recorded in this class may probably be attributed to the use of troops in mechanical and laborious employments, which form so large a proportion of the soldier's duties. As an indication of the peculiar hardships to which our troops are exposed, the rates of admission for wounds, accidents and injuries are 122 per 1,000 higher than those reported for the German army, and 142 per 1,000 higher than the decennial rate of the British Army.

It is interesting to note that the colored troops make a particularly favorable showing in the small number of admissions for alcoholism and its results, exhibiting, as they do, a rate of only 4 per 1,000 to rate of 76 per 1,000 of mean strength among the whites. On the other hand, in diseases of the nervous system they have an unexplained preponderance.

The report recommends a thorough revaccination of every individual of the military establishment. This means of preventing the spread of small-pox has proved very effective in the German army.

The report gives an account of a mild epidemic of yellow fever which occurred at Fort Brown, Tex., during the months of August, September, October and November, 1882. Assistant Surgeon W. C. Gorgas, U. S. Army, and Hospital Steward S. W. Reynolds, U. S. Army, contracted the disease. Lieutenant Wenie died on the fifth day after his seizure.

The number of recruits examined by army medical officers and private physicians during the year was 5,964 white, 428 black, and 247 Indian scouts. The total number of rejections was, for white 2,063, for black 131, Indian scouts, none.

The surgical records show only two casualties from actual warfare. The wounds and injuries reported were 5,692. The number of operations performed was 121.

Six hundred and thirty-eight specimens were added to the collection of the Army Medical Museum last year. The contributors to the collection were 9 surgeons, 20 assistant surgeons, 12 acting assistant surgeons, 1 hospital steward, and 49 citizens.

The addition to the library during the past year includes 3,912 volumes and 5,000 pamphlets, making the total number in the collection about 60,900 volumes and 68,700 pamphlets. To supply books required to make the files of the library complete will require an annual appropriation of $10,000, and it is recommended that this amount be appropriated.

The report again calls attention to the increasing necessity of a suitable fireproof building for the accommodation of the Army Medical Museum and the library.

An Army Medical Examining Board, consisting of Lieutenant-Colonel Joseph B. Brown, and Majors B. A. Clements and J. H. Janeway, surgeons, was convened in New York city on the 1st of March, 1883, for the examination of assistant surgeons for promotion, and of candidates for appointment in the medical corps of the Army.

The names of the candidates found qualified will be reported to the Secretary of War in season for their appointments to be submitted to the Senate when Congress assembles in December next.

There are now 9 medical officers on sick leave of absence; of these, 3 have been found incapacitated for active service and recommended for retirement by Army retiring boards, viz: Assistant Surgeon T. F. Azpell, who has been on sick leave since April 7, 1877; J. W. Buell, who has been on sick leave since August 23, 1877, and W. R. Steinmetz, who has been on sick leave since September 16, 1878; one has been recommended to be brought before an Army retiring board, with a view to his retirement from active service, viz: Assistant Surgeon J. V. DeHanne, who has been on sick leave since June 22, 1879; and

3 more are regarded as permanently disabled. Four medical officers are on ordinary leaves of absence after a tour of duty on the frontier, leaving 162 medical officers for duty October 1, 1883.

The medical officers who have died during the year are as follows: Brigadier and Brevet Major General Joseph K. Barnes, surgeon general (retired), at Washington, D. C., April 5, 1883; Colonel Charles C. Keeney, surgeon, at San Francisco, Cal., January 30, 1883; Major George P. Jaquett, surgeon, at New York City, N. Y., October 6, 1882; Captain William H. King, assistant surgeon, at Philadelphia, Pa., August 23, 1883; Captain Holmes O. Paulding, assistant surgeon, at Fort Sidney, Neb., May 1, 1883; Captain Bernard G. Semig, assistant surgeon, at San Francisco, Cal., August 1, 1883; First Lieutenant E. D. Schue, assistant surgeon. at Fort Thomas, A. T., October 1, 1882; Captain Joseph H. Bailey, assistant surgeon (retired), at Mt. Carmel, N. Y., April 1, 1883; Captain Henry R. Silliman, assistant surgeon (retired), at Philadelphia, Pa., January 1, 1883.

The last pages of the report are taken up with the full record of the services of these deceased medical officers.

STATE MEDICINE.

CONCERTED ACTION BY STATE BOARDS OF HEALTH.

[Reported for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

There has been a growing conviction among leading sanitarians entrusted with the official execution of practical health measures, that while the work of the American Public Health Association is of inestimable value in promoting the interests of sanitary science and sanitary reform, there is a constantly increasing need for an annual conference of State and other health officials, in regard to practical affairs of their every day work, some part of which work cannot profitably be discussed in a public meeting consisting largely of persons not familiar with its details.

After due consideration, a meeting of representatives of State Boards was held at Detroit during the recent meeting of the American Public Health Association, at which, after discussion, it was decided to call a meeting of the Secretaries, or other representatives of all State Boards of Health, in Washington, during May, 1884, for the purposes mentioned, and with the view of organizing a Section devoted to State Board work in the present Association, or the formation of a permanent separate organization especially adapted to the needs of State Boards of Health. Drs. Henry B. Baker, of Michigan, and J. N. McCormack, of Kentucky, were appointed a committee to confer with and secure the coöperation of all the State Boards in fulfilling the object of the meeting, and Drs. C. W. Chamberlain, of Connecticut, J. E. Reeves, of West Virginia, and Stephen Smith, of New York, were appointed a Committee on Organization, to report at the meeting in May.

The American Medical Association meets in Washington in May; and another reason for holding the meeting in Washington is that the representatives of the State Boards may also have an opportunity for conferring with the Senators and Representatives in Congress from their respective States in regard to national sanitary legislation. It would seem that whenever the health authorities of all the States shall meet, discuss and agree upon the course they will pursue with respect to yellow fever, cholera, small-pox, or any disease which endangers public health, without regard to State lines or borders, and whenever all State Boards shall act in concert, considerable progress will have been made in solving the problem of what are the best methods for national action in regard to inter-State and maritime quarantine or inspection and disinfection, as well as in the practical control of epidemic diseases within the several States of this country.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

A very large attendance of members of the Chicago Medical Society were present at the regular semi-monthly meeting, held on the evening of November 19th, for the transaction of considerable important business and hearing a number of scientific essays. The President, Dr. D. W. Graham, presided. In the absence of the Secretary, Dr. L. H. Montgomery, upon request of the Society Dr. James E. Henderson acted as Secretary *pro tem.*, and subjoined is the report of the proceedings, considerably abbreviated from his stenographic report:

Drs. Robert H. Babcock and W. L. Copeland, upon recommendation of the Board of Censors, were unanimously elected to membership.

Prof. E. C. Dudley, of the Chicago Medical College, read a paper on "The Immediate Operation for Laceration of the Perinæum." He advocated the operation immediately, or as soon after the confinement as possible, and discussed the subject in all its bearings. But as we expect to have the paper entire for publication in a subsequent number of the JOURNAL, we omit what would be an imperfect synopsis here. The reading of the paper elicited the following interesting discussion:

Dr. George H. Randell was particularly gratified that the matter of faulty and incomplete union of these cases had been brought so prominently before the Society. He himself had thought of the necessity for something more than we have gained by the immediate operation; he desired the author to explain more fully the frequency of the transverse rupture.

Dr. M. H. Thompson thought possibly it made no particular difference whether the operation was deferred for two days after labor or longer. My experience shows that in a much longer time after the operation for laceration than is recommended in the paper, I have placed the knees together, ordered the nurse to keep the parts clean with a douche of carbolized water, and taken all the necessary antiseptic precautions, and I have had perfect union to follow. I have again known cases in which union was

obtained, but it occurred irregularly, where perhaps the edge of the mucous membrane would be attached to a quantity of muscular tissue, but the union was firm. I think the patient can be placed in different positions, so long as it is done with gentleness, but I do not understand why it is so essential to keep them on the back, as stated in the paper.

Dr. R. H. Engert—If the laceration is found to be very deep, if it involves the rectum, I do not think a patient should be operated on under two months, and I will ask the author of the paper if he would operate, under any circumstances, immediately after confinement, no matter how deep the rupture? I lately had a case where there was a laceration in three different places, sideways up into the vagina, about an inch into the rectum, and in the perinæum proper toward the right side, and occurred to a woman with the tenth child. In this case I do not think it would have been practicable to perform an operation right after her confinement, as the parts were so much bruised that it would have endangered success in operating. Three months after the labor I performed an operation with perfectly good results, and which have been maintained up to the present time.

Dr. E. Ingals said: It is perhaps presumptuous for me—a general practitioner—to engage in this discussion, for what can I hope to add to that which has already been said, on a subject that has been so fully treated by those who make a special study of gynæcology. Yet I think there are some useful practices relating to the management of perineal laceration that have not been alluded to. I will say in advance that I am conservative in my views, both in the profession and out of it. I do not easily relinquish old practices. I think the profession is inclined to trust too much to things because they are novel, and about which we hope more than we know; and to reject measures whose usefulness has been demonstrated by long experience. The past history of our profession is full of treasures that have been discarded and that lie neglected all along its pathway. For many years I have attended such a number of obstetric calls as naturally fall to the lot of a general practitioner. Of course, I have seen a good number of perineal lacerations. I will tell you what I have not done for them and the results. I have not bound the limbs together, I have not required the patient to lie on her side, but have allowed her to take the position that she found to be the most comfortable. I seldom tell her that anything is wrong. If the laceration is extensive I may say to the nurse, "the skin is a little torn; see that the parts are kept scrupulously clean." No woman that I ever attended has had the primary operation performed, nor do I know of one who has had it done secondarily. I do not believe that any one of them would have been benefited by either operation. I can recall but a single case that required anything except cleanliness. This was a primipara, in whose case a severe labor and instrumental delivery resulted in extensive laceration. The wound did not heal kindly, and I stimulated the granulations by a few applications of nitrate of silver. She has since borne a number of children in rapid succession, and has had excellent health. I have cases of laceration that have remained under my observation twenty-five years, and they have experienced no trouble from it. I have had no case that I think would not have been injured by the primary operation. This operation must give the patient some shock and inconvenience, and it may increase her septic dangers, and all this when she is just emerging from the pangs and perils of labor. One-half of the cases of confinement in Chicago are attended by midwives, and I do not suppose any of them have this operation performed. I have consulted a number of the older practitioners of this city, and they all manage their cases just as I do mine and are rewarded with like results. We should not forget how well the lacerated perinæum will do when left to the reparative processes of nature alone. I am embarassed in not being able to assent to the teachings on this subject of eminent gynæcologists, but I should feel that I had done less than my duty, if I neglected to say a word in behalf of the poor women who bear our children.

Dr. J. H. Etheridge at this point asked the doctor—you say you never saw a case benefited by the operation? Answered—No case that I have ever attended in my own practice; but if the laceration is very extreme, and consequent prolapsus has occurred, then no doubt the operation would be beneficial. No case in my own practice, primarily, I am sure—and so far as I know, secondarily—has been benefited by the operation.

Dr. L. A. Harcourt—My own experience has been rather limited, but for seven or eight years, I think, I never met a case of rupture of the perinæum. I said to some of my neighbors, physicians, I have never in my practice had a case of this kind. I was cautioned to examine my patients after confinement. Heeding this caution, and examining them carefully, I found quite a number, and for the past three years I have operated in every case where I was permitted; what might be called the immediate operation. In some cases, I delayed 20 hours; not longer, and in every case, union by first intention was obtained. The gentleman preceding me spoke of the fear of alarming patients by telling them a serious accident has occurred. It is not my practice to tell a patient in a way that would alarm her. I have practiced the method spoken of in the paper, of paring the edges of the laceration, and I always use the deep sutures, passing them completely beneath the laceration; this, with good care, and the patients have all recovered. I have had only one case of "central laceration," which occurred eight years ago. The labor was quite easy, the child was small, and I was astonished to find a laceration. On examination next morning, I found a small perforation, closer to the vaginal outlet than to the rectum. In that case, I did nothing but use a mild application of nitrate of silver, so as to favor healing of the wound, and it proved a success. I think the danger of septic poisoning is overestimated. A year ago last March, I was suffering from inflammation of the eyes, and was called upon to attend a woman in confinement. The child was very large. The head was born without any rupture to the peri-

næum ; the cord was twisted around the child's neck, and I made an attempt to draw the cord down, so as to save the child from strangulation. Pains came on suddenly, the body was forcibly expelled, and tore the perinæum through entirely, the anterior half for three-quarters of an inch.

I was in no condition to perform an operation, and summoned a brother practitioner, who kindly consented to do so for me, if the patient would not object. Her friends, however, refused ; she neglected every precaution in regard to cleanliness, and yet the woman made a good recovery. She came to me afterward, and complained that she could not retain fæcal matter, but appeared to be in good health. Now, that was a most favorable case for blood-poisoning. All the surroundings were most favorable for it ; no measures were taken to keep the parts clean. I am therefore, in favor of the immediate operation in almost every case, for my own all resulted favorably.

Dr. T. P. Seely—My experience is, in succeeding to produce good results, simply by placing the patient on the side, fixing the limbs together, closing the parts and keeping them in apposition for a few days, and observing strict antiseptic precautions; and I would like to ask the author, while I am on the floor, why he places the patient on the "dorsal decubitus" during the operation, as I do not understand how he fixes the patient afterward.

Dr. Dudley, in closing the interesting discussion, of which the foregoing is a résumé, said, relative to the frequency of the transverse rupture of which one member asked, that he was unable to answer positively. Within the past year, however, he has seen at the Mercy Hospital four or five cases of this kind ; also, that he had met with two cases in private practice. I am, therefore, inclined to think this form of rupture is quite common. Thinks incomplete central rupture of the perinæum is the form which most often occurs; have noticed cases in which central rupture had occurred, and in which the posterior commissure had not been ruptured at all. Under these circumstances the rupture is always overlooked, unless very careful examination is made with one finger in the vagina and one in the rectum. If Emmett's idea is not very much the best, then the basis of it may rest in the fact that in incomplete rupture the transverse variety is the most ordinary form. I do not know whether this is the case, but when that form of rupture occurs the perinæum divides in front so that the parts go to either side, and the shape of the wound is like the letter T, as was stated in the paper. Moreover, I do not mean to say positively that after contraction of the cicatrix, that it will be a cause of a smaller perinæum, but it may be a possible cause, and as one of the speakers asked, if I would operate within two days after laceration occurred ? I can reply by stating yes, or sooner ; and if not called sooner I should operate on the strength of my experience. I prefer the dorsal position, with the thighs flexed and a small roll placed under the knees. This is the best position for the patient. There is no objection to placing a patient on the side if she again will assume the dorsal position ; and the patient generally finds the latter the easiest. I always place a bandage around the knees and legs to keep them constantly in the same position. My experience in the primary operation for complete rupture through the sphincter ani muscle is confined to one case, in which union occurred. Apparently, the union of the perinæum was pretty good, but not as good as if a better operation had been performed, there being a slight recto-vaginal fistula left. The patient has had several children since. I think I will make this statement in general, that I would operate in every case of ruptured perinæum, especially if the rupture involved the deeper structures of the vaginal portion, but where rupture occurs through the sphincter ani muscle, in a majority of cases union does not take place, although cases of this kind are on record in which union of this sphincter has occured. There are cases in which the internal sphincter muscle has been equal to the retentive needs of the patient. Regarding the needle to be used, the one used by Thomas, Emmett and others, is the straight one. The reasons for preferring it are the following: A straight needle can always be introduced in such a way as to know where the point is if you know its length. The curved needle is much larger and makes a larger incised wound after every suture. The straight needle is perfectly round, and makes a punctured wound, and, again, *per se*, there is an unnecessary amount of damage done with a curved needle. This central transverse rupture is one in which it is difficult to see how the parts can be kept in contact by tying the knees together. The tissues retract afterwards, and tying the knees together would have no influence at all unless with the vaginal portion of the wound ; neither would sutures passed through the cutaneous surface of the wound—only sutures passed in the axis of the vaginal outlet could, under these circumstances, bring that torn tissue down to the place from which it was torn.

A paper on Glycosuria was next read by Dr. Oscar C. DeWolf. (see this paper) published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Nov. 24th, 1883. Discussion upon this very important subject was deferred until the next meeting.

Dr. F. E. Wadhams was to have presented a paper on "Nerve-Stretching" for the relief of an obstinate case of sciatica, but the late hour precluded its being read.

The resolutions presented at the last meeting regarding "The Nucleus of a Medical Library" were taken from the table, and Dr. Edmund Andrews said, "the formation of a medical department in the public library, accessible to every family physician in the city, is a greater public necessity than the duplication of a vast number of novels." The result of the conference with the public library board was that the books would have to be presented and not loaned to the library. This Society would incur no expense in taking care of them. He moved, therefore, the passage of the resolutions reported at the last meeting, and that $500 be appropriated for the purchase of books and journals, which was easily carried ; also that a committee of three on Library be now appointed by the chair, resulting in Drs. E. Andrews,

F. C. Hotz, and O. C. DeWolf forming the committee for three years, two years, and one year each, in the order their names appear. Dr. J. G. Kiernan wished to have a committee on Medical Legislation appointed, as many of the laws relating to our profession in this State are in a very unsatisfactory condition. Particular reference was made to the confidential relations between physician and patient, and the former's appearance on the witness stand, as any member of this Society may be compelled to reveal the secrets of a patient. For this and similar reasons he offered the above suggestion in the form of a motion, to determine what measures are needed to remedy existing laws on this subject. The motion was unanimously carried. The chair announced that he would appoint the committee at the next meeting.

Another motion made and seconded that we do now adjourn, was also unanimously carried.

L. H. M.

BOOK REVIEWS.

TRANSACTIONS OF THE MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND AT ITS EIGHTY-FIFTH ANNUAL SESSION, HELD AT BALTIMORE, MD., APRIL, 1883. 8vo. 302 pp.

One of the most interesting parts of this volume is that which treats of the growth and development of the library, and the address of Dr. John S. Billings on Medical Bibliography, which has already been published and commented upon. The report of the Library Committee shows a valuable addition of new and recent works, the number of volumes in the library reaching 3,346, with 108 journals received regularly, and also shows an interest in the older examples of medical literature, with an interest in medical portraits, old diplomas, and other material which, while it is no longer of much practical value, represents the history and progress of the profession very satisfactorily. Our institutions are still young enough to make it possible to secure these records, at the expense of some effort—and old enough to make them scarcer and more valuable every day. The report of the Committee on the Directory for Nurses in Baltimore does not appear to be very encouraging. This city of 332,190 inhabitants (census of 1880) finds use for only 29 nurses, male and female, outside of its hospitals, who were employed 55 times, and the revenue of the Directory was $111.41 for 11 months —which represents the age of the Directory.

Dr. Richard Henry Thomas gives, as the report of the Section on Practice, the result of four and a quarter years of observation on the influence of season and weather on the death-rate from diphtheria in Baltimore. His article is illustrated by charts, which give the curves of relative humidity, temperature, velocity and direction of wind, rainfall, and the correspondent prevalence of diphtheria throughout the year; and he concludes that the weather has an important bearing upon the rise and fall of the violence of the disease; temporary changes having but little effect. The conditions favorable to a rise are, a low barometer, low winds, especially from the east, high temperature with high humidity, and heavy or continued rainfall. The conditions favorable to a fall are, high winds, especially from the west, low humidity with high temperature, or high humidity with low temperature, and (generally), a high barometer.

The report of the Section on Materia Medica embraces observations by Dr. John S. Lynch on the antipyretic effect of carbolic acid, and on the astringent influence of rubus procumbens in diarrhœa and dysentery.

Dr. Wm. T. Howard, in the report of the Section on Obstetrics and Gynæcology, discusses vesico-vaginal and utero-vesico-vaginal fistulæ, with reference to cases. In the report of the Section on Psychology, Dr. J. W. Chambers gives seven cases of nerve-stretching for the relief of sciatica, with perfect and almost immediate relief in five; partial relief in one, and no improvement in one, which was operated upon twice.

Dr. H. Clinton McSherry furnishes us the report of the Section on Ophthalmology, Otology and Laryngology, the details of two cases of laryngeal stenosis, and discusses the treatment, with full illustrations to the text, of the special apparatus required.

The Direct Action of Ethyl Alcohol upon the Heart, by Dr. H. Newell Martin, is a plain statement of interesting physiological experiments, and, what is rare in physiological work, they are easy of comprehension. Dr. Martin complains that the immense literature upon the subject, comprehending 160 titles in the Index Catalogue of the Library of the S. G. O.; is of very little use; that the so-called experiments with alcohol are usually with a little alcohol plus a good many other things. He concludes that blood containing 1/8 per cent. by volume absolute alcohol, has no immediate action on the isolated heart; 1/4 per cent. diminishes the work done within a minute; 1/2 per cent. may reduce amount pumped out by left ventricle to so small a quantity as not to supply the coronary arteries. This is due to influence on the elasticity of the cardiac muscle; to a lowering of its tone, either by direct combination or by influence upon its nutrition, possibly direct. These experiments were performed directly upon the heart. To produce such effect through the stomach, much more alcohol would have to be injected, that is, equal to 1/4 per cent. of the total blood in the animal.

Dr. C. W. Chancellor, under the head of Sewerage of Cities, gives a long and interesting description of Siemen's pneumatic system, as applied in the city of Luxembourg. Dr. J. D. Arnold gives two cases illustrating some forms of laryngeal phthisis. Dr. S. C. Chew gives the notes of a case of dexicardia. Dr. S. McLane Tiffany, in giving the details of an operation for the removal of the upper jaw, discusses the advantages of the prone position during operations upon the jaws, and of semi-narcotizing the patient with opium or one of the alkaloids before administering the anæsthetic. Dr. Philip C. Williams reports three instructive cases of malarial fever in puerperal women, where the diagnosis was gravely embarrassed. The list of membership in this Society embraces 216 names.

TRANSACTIONS OF THE COLORADO STATE MEDICAL SOCIETY, AT ITS THIRTEENTH ANNUAL CONVENTION HELD IN DENVER, JUNE, 1883. 8VO., 122 pp.

From the list of members published in these transactions, it would appear that the Colorado State Medical Society has 109 active members to do its work, and from the paper by Dr. Jesse Hawes, entitled Charlatanism in Colorado, it would appear that a large part of that work has been to expose and get rid of quacks and impostors, which it seems to be doing quite effectually. The President, Dr. P. R. Thombs, takes as the theme of his annual address, "The Neuropathic Diathesis, or Insane Temperament and its Management by the State," in which he emphasizes the necessity for State laws governing the sexual commerce of such, in or out of wedlock, by forbidding marriage of a certain class, and quarantining effectually the victims. Dr. R. G. Buckingham gives a report on Obstetrics, in which he refers most particularly to his own practice and experience in cases of difficult labor. Dr. Edward Rivers in his report on Ophthalmology gives an interesting résumé of the progress of to-day. The Bacillus Tuberculosis is discussed by Dr. Charles Denison, and this followed by two interesting articles—one by Dr. S. Edwin Solby on Climatology, in which he discusses temperature as influencing climatic change; and the other on the Analysis of Signal Service Statistics with reference to Colordo Climate, by Dr. Samuel Fisk. Dr. J. W. Collins reports a Case of Uterine Stricture. Dr. Geo. W. Cox discusses Areolar Hyperplasia of the Uterus, and in considering the means of diagnosis, he recommends the passing of the whole hand into the vagina under the influence of an anæsthetic, which practice he applies to virgins as well as to married women. Dr. J. J. Macdonald shows a symptom of the infection now pervading medical societies, by breaking out all over in verse, in a poem replete with variety, puns and rhyme.

DOMESTIC CORRESPONDENCE.

HAY FEVER.

In the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION of October 13, 1883, is published a paper on Hay Fever, by C. Hixson, M.D., of O'Fallen, Illinois.

As the writer says, "I have been a sufferer from hay fever for twenty-five years," and that "my opinion is that those who cure hay fever have never seen a genuine case, but have mistaken it for a case of common cold," I think it is time that he should hear from one who, like himself, has "sat up of nights in order to get a modicum of sleep."

I prefer to call the disease summer catarrh, as I believe the dust from hay, like the pollen from rag weeds, is only one of the causes of that peculiar disease.

If the doctor, when he says no one can cure hay fever, means such a cure as will ever after secure the patient from another attack, perhaps he is right; but if he means to state that is not amenable to such cure as are intermittent and remittent fevers, then I think he has "during the last twenty-five years" not swallowed the right "half of the materia medica."

As I have suffered from hay fever thirty-seven years, just twelve years longer than Dr. Hixson has, I shall take it for granted that I know what the disease is, and therefore waste no time in describing the frontal headache, the stuffed feeling of the nose, nor the number of handkerchiefs I have made ready, in a given time, for the washerwoman, nor the nights, seventy-two hours long, I have "sat up" because I could get my "modicum of breath" in no other position. But to the treatment.

When a sufferer finds that an attack of summer catarrh is approaching, I would have him take from 15 to 20 drops of the tincture of opium and 15 grs. of iodide of potassium. He should repeat the tincture of opium every hour until the headache, the choriza and the tightness of the chest are relieved. This will generally occur after the second or third dose has been taken. Then have him take 15 to 20 grs. per day of sulphate of quinia, divided into three doses and taken after meals with 10 grs. of iodide potassium. These last remedies should be continued two or three days, or until all the symptoms of the disease are removed. If the symptoms for which the tincture of opium were given recur, it should be repeated in full doses as often as required. When I say full doses I do not mean, the so many drops of the materia medica, but the quantity sufficient to allay the symptoms for which the opium is administered. Last night I took 100 minims of tincture of opium in two doses for what I believe to have been my last visit of hay fever until next July—possibly until August or September. To-day I visited my patients as usual; and to-night I am writing this letter.

And now I come to the most unpleasant part of my duty, as I take no pride in the facts which the truth compels me to state. Twenty years ago I was advised by a medical friend to smoke tobacco for my infirmity. I took his advice. During the first ten years after I began my evil habit I very seldom had to resort to opium, quinine and iodide of potassium. Since that time the tobacco smoke has lost some of its potency, but the other remedies named never fail.

I hope when Dr. Hixson reads this paper he will not say he has tried all of them with no benefit, until he tries them in the quantities, and in the order stated. Of course, if he prescribes opium to a new patient, it is not necessary for me to suggest that he must gradually explore his way to such patient's opium capacity, which often lies far beyond the maximum laid down by the authorities.

Such is the treatment of summer catarrh, by which I have made life tolerable in one of the most annoying diseases which affects the human body. If Dr. Hixson's case has not become an outlaw to materia medica I hope to hear a good report from him.

S. S. BOYD,

DUBLIN, IND.

STRICTURE OF THE ŒSOPHAGUS.

MR. EDITOR:

No. 16 of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION contains an interesting article on "Stricture of the Œsophagus," etc., that reminds me of the following case:

One year ago Mrs. A. D. Peebles, of near Shelbyville, Ill., was taken with puerperal convulsions, and had three or four M.D.'s called. According to Mr. Peebles statement she was compelled to swallow pure, undiluted chloroform. In about three weeks after her confinement she had great difficulty in swallowing solid food, and in December last I was consulted and diagnosed stricture of the œsophagus, and selected gradual dilatation, but they (Mr. and Mrs. Peebles) objected. I explained to them the use of the bougie and the danger of her disease, but some of their friends (?) insisted on their consulting a physician in Decatur, which they did, and was treated for "spasm of stomach."

I requested Mr. Peebles to write me, after his removal to Kansas, which he did, and the following letter will explain itself. Respectfully yours,

S. HARVEY LAMBERT.

Assumption, Ill., Nov. 2, 1883.

TWIN FALLS, KANSAS, June 16, 1883.

DR. S. HARVEY LAMBERT:

Dear Sir—I will take the liberty to write you a few lines, as I believe I owe you an apology for not writing to you as per agreement, about my wife's illness. Last winter her case developed into one of well-marked stricture of the œsophagus. She thought of coming back to see you about it, but she got bad so fast, and it was so far to come. We tried all the doctors out here in this county, but got no relief, so I took her to Kansas City, Mo., to Drs. ——— and ———, Surgeons of Kansas City Medical College. They passed a bougie down the œspohagus, commencing with small ones and increasing until they passed six different sizes.

She had not swallowed any solid food of any kind, not even as large as a pea, for three months and four days. But after the first operation she could swallow thickened soup, and after the second she could swallow almost anything she wished.

Dr. ——— said the stricture was caused by some very strong medicine given her last fall, during that spell of sickness she had. She stayed six days the first time, and went back once since and stayed two days at Kansas City. She is now about well. She was operated on once a day by the doctors.

Yours truly,

A. D. PEEBLES.

ALL the European Powers have signified their adhesion to the proposal of the Italian Government to summon a conference at Rome, with the object of making sanitary regulations, and drawing up an international sanitary code. Signor Maricini, Minister for Foreign Affairs, will shortly address a circular to the Powers on the subject.

MISCELLANEOUS.

CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING NOVEMBER 24, 1883.

Kennedy, Stephen D., Medical Inspector: dismissed the service by sentence of a general court martial.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 16, 1883, TO NOVEMBER 23, 1883.

Moore, John, Lieutenant-Colonel: relieved from duty as Medical Director Department of the Columbia. (G. O. 29, Department of the Columbia, November 8, 1883.)

Brooke, James, Major and Surgeon: relieved from duty at Angel Island, California, and assigned to duty as Post Surgeon, Presidio of San Francisco, California. (Par. 1, S. O. 162, Department of California, November 14, 1883.)

Horton, Samuel M., Major and Surgeon: leave of absence, granted October 20, 1883, extended three months. (Par. 7, S. O. 266, A. G. O., November 20, 1883.)

Bache, Dallas, Major and Surgeon: assigned to duty at Fort Adams, R. I. (Par. 5, S. O. 215, Department of the East, November 19, 1883.)

Williams, John W., Major and Surgeon: granted leave of absence for one month on Surgeon's certificate of disability, with permission to leave the limits of the Department. (Par. 5, S. O. 157, Department of the Columbia, November 12, 1883.)

Town, F. C., Major and Surgeon: until further orders to perform the duties of Medical Director Department of the Columbia. (G. O. 29, Department of the Columbia, November 8, 1883.)

Munn, Curtis E., Captain and Assistant Surgeon: assigned to duty at Fort Warren, Massachusetts. (Par. 4. S. O. 216, Department of the East, November 20, 1883.)

Winne, Charles K., Captain and Assistant Surgeon: relieved from duty at Fort Winfield Scott, California, and assigned to duty as Post Surgeon Angel Island, California. (Par. 1, S. O. 162, Department of California, November 14, 1883.)

Appel, D. W., Captain and Assistant Surgeon: granted two months leave of absence. (S. O. 68, Division of the Atlantic, November 16, 1883.)

Cochran, J. J., First Lieutenant and Assistant Surgeon: assigned to duty at Fort Bayard, N. M, (Par. 5, S. O. 236, Department of the Missouri. November 15, 1883.)

Richard, Charles, First Lieutenant and Assistant Surgeon: relieved from duty at Fort Adams, R. I. (Par. 3, S. O. 216, Department of the East, November 20, 1883.)

Wilson, George F., First Lieutenant and Assistant Surgeon: to report in person to Lieutenant Schwatka, 3d Cavalry aid-de-camp, for temporary duty in connection with the completion of report of recent expedition to Alaska. (Par. 3, S. O. 156, Department of the Columbia, November 9, 1883.

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ORIGINAL ARTICLES.

DENUDATION, OR EROSION, OF THE TEETH.

BY JOHN S. MARSHALL, M.D., CHICAGO, ILL.

[Read to the Section on Oral Surgery of Association, June, 1883.]

MR. PRESIDENT AND GENTLEMEN:

The subject to which I desire to call your attention is one that is still under controversy, and my object in presenting this paper is to review the opinions that have generally been entertained as to the cause of the disease, and emphasize, if I can, more fully than has yet been done the objections to these views, and then recall to your minds an explanation of the cause of the disease which has not heretofore received the attention it has deserved, viz., electro-chemical action.

The terms denudation and erosion are derived from the Latin, the *first* meaning "to lay bare," or "the condition of a part deprived of its natural covering, as a part denuded of its cuticle or mucous membrane, a bone of its periosteum, or a tooth of its enamel." The latter term means "to eat away," or "to be gradually destroyed by the action of some corrosive agent. It is often used in the same sense as ulceration." (Duglinson.)

Various terms have been applied to this disease, such as denudation, erosion, abrasion, surface wear, and atrophy.

Denudation or erosion of the teeth is a disease which attacks these organs, beginning with the enamel and gradually involving the subjacent dentine, without any of the appearances or characteristics of dental caries. It consists of a gradual wasting away of the enamel and dentine, generally upon the labial and buccal surfaces, most often beginning with the incisors, though it may attack other teeth first, and may involve all of the teeth to the second molars. It usually begins at the gum, forming cavities or grooves, which follow the curves of the gum lines. They are as evenly and smoothly cut as though made with a file or disk, are highly polished, perfectly hard, and many times absolutely free from discoloration.

The surface of the groove is generally quite sensitive, sometimes exquisitely so, causing the patient much uneasiness and pain. Occasionally the process begins at numerous irregular points on the labial surface, which extend, and after a time coalesce, involving the loss of the entire enamel wall of this surface. The disease progresses, in rare cases, as far as the pulp, laying that organ bare, while in the majority nature provides against it by filling up the pulp chamber with secondary dentine and thus protecting it from exposure.

In other cases, after progressing to a more or less extent, it seems to become self-arresting.

The rapidity with which the disease progresses is also variable. In some cases the loss of substance will be so slow as to require ten, fifteen or twenty years to reach the pulp chamber, in others only a little more than as many months. The superior teeth are much more liable to be attacked than the inferior, though cases are quite common in which both are affected, but I have never seen the lower teeth destroyed to the same extent as the upper.

John Hunter was the first to notice this disease, and he described it about a century ago. He named the disease "Decay by Denudation," and thought the disease was inherent in the tooth itself, and stated that he had seen cases where it appeared as if the outer layer of dentine had been destroyed first, and that the enamel afterwards broke through for want of support.

This theory is evidently erroneous, for no such phenomenon occurs in this disease. He has doubtless confounded it with that form of caries in which the enamel becomes partially decalcified in spots, and permits the pathological condition to extend to the subjacent dentine, when after a time they break away together, leaving a shallow cavity more or less irregular in form, but lacking that smooth, polished condition which always attend a case of true denudation or erosion.

Bell dissented from the views of Hunter, but expressed himself at a loss to explain the cause of the disease. He suggested, however, that the cause might be one of faulty development of certain concentric portions of enamel, which would render such portions more liable to mechanical abrasion, or other injury, than the rest.

If such were the true explanation, we should expect to see the grooves extending completely around the necks of the teeth, but this condition never occurs; and yet certain portions of enamel may, as he states, be faulty in their development, but not necessarily, however, extending completely around the tooth; and thus predispose such teeth to the action of solvent agents, as is believed to be the case in dental caries.

Fox, in writing upon the subject, frankly admits that he is unable to assign a cause for the disease, but thinks it is dependent upon some solvent property of the saliva. If the saliva contains the solvent which is responsible for this disease we would expect to find

all the surfaces of the teeth equally affected, for they are always more or less in contact with it. The inferior teeth are completely bathed in the saliva, so that if the suggestions were correct, the lower teeth would be most often affected, while clinical experience teaches the very opposite of this.

Wedl describes the disease and classes it among the atrophies, but makes no attempt to account for its peculiar manifestations. He calls attention to the fact, however, that sometimes the mucous membrane of the cheeks and lips is raised into a fold opposite the dental arches, and suggests that it may be well to consider in future cases whether any relation exists between the defects upon the necks of the teeth and these folds or ridges.

These folds or ridges I have noticed many times, but they are by no means a constant accompaniment of the disease, and when such instances have occurred, I have been inclined to consider it a result, rather than a cause of the disease.

Salter calls the affection "surface wear," and ascribes it to friction of the lips, cheeks and tooth-brush.

The surfaces of the teeth attacked are those usually reached by the tooth-brush, and by many the disease is thought to be one of mechanical origin entirely; but this cannot be the case, for often the grooves or cavities will reach around the teeth mesially and distally to points impossible to be reached by the tooth-brush, or by folds of the mucous membrane of lips or cheeks.

The break in the tissue is also, in some cases, so decidedly undercut as to prove conclusively that such a condition could not have been caused by the friction of the tooth-brush. Tomes also observed a case of the disease where the patient rarely or never used the tooth-brush, and Mr. Harrison reported a similar case at the meeting of the Otological Society of Great Britain, in May, 1870. But the most conclusive argument against the mechanical origin of the disease was furnished by Dr. Muric, in a paper read before the same society at its meeting held in June, 1870, in which he related the fact of having found a sea lion (the Otaria Jubata) whose teeth showed the results of this disease to a very considerable extent. The positions most notably affected were the sides of the teeth, where friction would be reduced to the minimum.

The tusks, or great cuspids, were most conspicuously affected by the disease. Tomes thinks this condition, "at least in so marked a degree, is not common among seals, but has seen an approach to it in the teeth of several specimens of different species," and he further says, that in the museum of the Royal College of Surgeons may be seen a skeleton of a seal in which this condition of the teeth is well exemplified, some of the teeth being deeply grooved in positions not exposed to friction.

Magitot regards the disease as a result of caries which has been spontaneously cured or arrested by the obliteration of the dentinal tubuli.

I cannot understand how this author, for whom I have the greatest respect, can arrive at such a conclusion from the phenomena presented by the disease. If, as he suggests, it is caries in the incipient stage, arrested or cured by the obliteration of the tubuli from a deposition of calcareous matter, why is it that in almost every case, the teeth thus affected are sensitive, some exquisitely so, to the touch of an instrument, changes of temperature, acid condiments and confections? Calcified nerve tissue has no sensation (assuming that nerve fibrils penetrate the tubuli of the dentine); hence his theory in this respect must be erroneous. These cases are also usually progressive, many times extending over a series of years, and perceptible changes can be noted from time to time.

To illustrate, the model I show you is the cast of the mouth of a gentleman living in Chicago. The case I consider a very remarkable one. You will notice the six anterior teeth and the right first bicuspid of the upper jaw are quite extensively denuded, the enamel being entirely removed from all of the teeth named, upon their anterior surfaces, with a considerable portion of the dentine, leaving an inclined plane pointing backward, and extending from the margin of the gums to the ends of the teeth, shortening the anterior teeth to the extent of about a sixteenth of an inch.

The denuded surfaces, you will notice, are not all grooved in one direction, the central incisors and the left lateral are grooved horizontally like all the others, but are also grooved longitudinally at the cutting edges. The first and second bicuspids of the lower jaw on the right side are also affected, but not to the same extent as those of the upper jaw. Fifteen years ago Dr. Allport, of Chicago, filled with gold the six anterior teeth upon their cutting edges, for the front teeth originally occluded squarely, and by mechanical abrasion, cup-shaped cavities had been worn into the dentine, making it necessary to fill them. The centrals were also slightly decayed at the margin of the gums, and small fillings were also inserted there.

Nine years ago it was first observed that the disease had attacked the teeth; two years later it had progressed so far as to make the edges of the fillings stand out above the surrounding tissue on the labial surfaces. These edges were rounded off, and the case dismissed for the time being. Shortly afterwards the gentleman went to Europe, and remained there four years. On his return not a vestige of the fillings was left, or even a depression to indicate where they had been, the surface being as smooth and regular as though cut and polished with file or disk.

There has also been a perceptible loss of structure during the last three years, but the destruction has been much less rapid than previously.

Numerous other cases might be mentioned to substantiate this position, as well as the fact that it does not originate in incipient caries. Cases have occurred in their incipiency, and progressed stage by stage under our eyes, and at no time have they shown any signs of decay.

In the case just mentioned two of the teeth were slightly decayed at the gum line, but none of the others were at any time affected in this way.

The late Dr Eleazer Parmley, of New York, re-

ported some years ago a case in which erosion had attacked natural teeth that had been set upon an artificial piece in precisely the same manner as the teeth having natural attachments to the alveolus.

Tomes and Harris are both inclined to think the disease is one of chemical origin. Tomes suggests that it is caused by the fluid secreted by the mucous membrane, covering the parts affected, undergoing fermentation or affording a nidus for fermentation, and thus may provide an acid solvent.

Harris adopts the opinion that the loss of substance which characterizes the affection is produced by the action of acidulated buccal mucus. In every other part of the mouth this fluid is mixed with saliva, and the acid it contains so diluted as to prevent it from acting on other portions of the teeth.

The view held by these authors is the one most generally accepted, I think, perhaps, because no better theory has been advanced. This theory, however, does not account for all the peculiarities of the disease. To illustrate; certain teeth are affected in individual cases to the exclusion of others. I have seen several cases where the disease attacked the superior incisors and bicuspids while the canines were entirely free, and *vice versa*, and one marked case of the disease in the lower bicuspid on both sides, while all the other teeth of the mouth escaped entirely.

I have frequently tested these cases with litmus paper to ascertain the condition of the mucous secretions of the lips and cheeks, but have never found any very marked acid reaction; in fact, have often found greater reaction in mouths where the teeth were entirely free from the disease. In looking for the views entertained upon the causes of this disease I found also an article translated from the German by C. E. Koch, and published in the *Missouri Dental Journal*, August number, 1872, in which the author—who failed to sign his name—advances the theory that the disease is one having a close analogy to the process of resorption, attacking the roots of the deciduous teeth prior to their being replaced by the permanent organs. He claims that "the gum may secrete a fluid endowed with functions similar to those possessed by the absorbent organ found at the roots of the deciduous teeth, and by this means the tissues are removed, leaving the surfaces as in the case of the roots of the teeth just mentioned, smooth and polished;" but qualifies his statement by saying that he "feels inclined to assume at least a predisposition of the tooth concerned, for the reason that in all cases only certain teeth are attacked by it." He bases his argument, however, upon what he assumes to be a fact, viz.: "that denudation always appears upon the neck of the tooth." He has evidently overlooked the fact that cases of the disease occur, as we have already stated, upon the labial and buccal surfaces, remote from the margin of the gums, at points not likely to be reached by the eroding fluid in sufficient strength to account for the rapid progress of the disease in some of these cases.

Garretson thinks the true explanation of the cause of this disease has been but recently enunciated in the experiments of Mr. Kincely Bridgman, the author of the electro-chemical theory of decay.

Garretson says his present convictions have led him to believe that in this direction will be found to lie not only the cause of the disease, but the prophylaxis. He further says: "It would seem, however, that back of the immediately acting cause must be a predisposition; here it would seem to be the result of impressions made on the enamel at the period of its formation, and which deficiency the nutritive functions have failed to correct. It might, indeed, very well be that such enamel is entirely deficient in vital resistance, and thus subject to be acted upon as any inorganic structure, being by electrolytic action simply dissolved."

I have called your attention to the opinions of all the most eminent dental pathologists who have written upon this subject, from John Hunter down to the present time, and have stated what seemed to me to be the objections to their views, but I fear we are not much nearer a solution of the problem than when we began. I am, however, very deeply impressed with the idea (as expressed by Prof. Garretson,) that in the electro-chemical theory of decay of Mr. Bridgman seems to lie the solution of the problem.

The case recorded by Dr. Eleazer Parmly had always been a mystery to me until I studied Mr. Bridgman's experiments, and since that time I have felt that here was possibly the explanation; that it was of electro-galvanic origin; the plate and the teeth forming the elements of a battery, and the buccal mucus, which is of slightly acid reaction, in contact with the labial and buccal surfaces forming the acid medium by which the current was established and maintained. Now, may we not carry this thought a little farther, and apply the theory of Bridgman to this disease?

The tooth, invested at the root by vital tissues, is rendered electro-positive, thus forming the positive element of a battery; the air surrounding the crown or exposed portion renders that electro negative to the root, and forms the negative element; or, in other words, the tooth is polarized. The only thing now needed to establish an active current is an acid fluid, and that we have almost constantly in contact with the labial, buccal and approximal surfaces of the teeth, at just the points where the disease manifests itself.

A piece of metal, when polarized, is positive at one end and negative at the other, neutrality being reached at the center. In the case of the copper wire in Bridgman's experiments, only that portion of the wire exposed to the atmosphere was rendered negative, no matter how much or little was exposed, and the neutral point was reached at that portion protected from the action of the atmosphere. The greatest loss of substance of the copper wire was at the surface of the fluid (dilute sulphuric acid) or where the fluid and the atmosphere came in contact, and beneath the fluid there was no action at all. We argue, therefore, that, like the copper wire, the tooth will be acted upon most vigorously at the junction of its two poles, provided there is an acid medium like the buccal mucus to establish and maintain the electro-chemical action. By this action the lime salts are removed at the line of junction between the atmosphere and the buccal mucus, and washed away.

This theory also explains one of the very common and at the same time peculiar phenomena of the disease, viz: the under cut condition of the grooves at the border nearest the gum. It is a law of electricity that the main current always flows from the positive to the negative pole, and that the positive element is most readily acted upon and soonest destroyed. The same laws govern like conditions in the mouth. The root of the teeth being positive, and the crown exposed to the atmosphere (and not protected by fluid) negative, the greatest waste would be towards the root or positive pole, and as soon as the gum line was nearly reached the external surface would be protected by the fluid always present at this point, and the loss of substance cease, while the other portions toward the root would be acted upon with the original intensity, and thus in time would occur the under cut condition.

There is one other factor, however, entering into this problem, which must not be overlooked, viz: vital resistence, and it doubtless must exert a powerful modifying influence over electro-chemical action; for observation has taught us all that teeth of the best organization have stronger vital resistance than teeth poorly developed. This is illustrated by the marked difference with which these teeth yield to the ravages of dental decay.

I have also noticed that the teeth most often attacked by denudation, or erosion, are those that are generally classed as medium or soft teeth, low in vital resistance, the patient often inheriting a peculiar cachexia, the scrofulous or syphilitic, which has had a depressing influence upon the developmental process, thus lowering the power of vital resistance, and predisposing the teeth, as well as other organs of the body, to the ravages of disease.

This seems, to my mind, to be the most rational explanation of the cause of this affection that has yet been promulgated, and if I have been able to throw ever so little added light upon this question, I shall have succeeded in my undertaking.

DISCUSSION.

Dr. G. H. Goodwillie. Had Dr. Marshall any opportunity to inquire into the previous history of the case described?

Dr. Marshall. In the case of which the cast was shown there was probably inherited syphilis. The pulps of all the teeth were alive. Treatment consisted in cutting off a small portion of the surface towards the palatine wall of each of the incisors, without exposing the pulp, and fitting a ring to which a cover of platinum, very thin, was attached, forming a cap; to this cap a porcelain crown was soldered, and the whole cemented to the stump of the tooth with oxyphosphate. The cuspids being only slightly affected, were not interfered with, but the probabilities are that in time they will have to undergo the same treatment.

Dr. Goodwillie. There is no doubt that the structure of the teeth is often affected by certain diseases. By the marks which they leave on particular portions of the tissue, we can almost tell at what time the injury was wrought, and what it was that caused the disturbance. Syphilis, small-pox, whooping-cough, scarlet fever, and the pustular diseases have each their characteristic marks, by which we can tell at what portion of the eruptive period their influence was felt.

Dr. L. Buffett, Cleveland, had just a word to say. If the destruction of tissue in the disease under discussion is to be accounted for by the electro-chemical theory, it is to be borne in mind that it is only because this action places the tissues in condition to be acted upon by an acid, which, at bottom, does the real work of destruction.

Dr. Jacob L. Williams thought the theory advanced by Dr. Marshall quite plausible. He remembered in this connection a remark his preceptor, Dr. Keep, used to make regarding galvanic action in the mouth —he called it animal galvanic action—and that was with reference to the frequent similarity of the points of attack on opposite sides of the mouth. This statement of Dr. Marshall's puts it in a more scientific shape.

Dr. W. P. Horton, Cleveland. Dr. Marshall propounds a new theory to explain the cause of erosion, and makes out a very good case. In the present instance, he says there was underlying it all a syphilitic taint. Now, the question is, is there any limit set to the period within which the poison thus introduced may set up the acid action which causes the destruction, or may it not be antidoted by medication at the proper time?

Dr. Marshall. Did I understand the question to be, was there a specific deposit among the crystals of the forming tooth that would in time develop an acid?

Dr. Horton. The acid or its cause must be inherent in the system. Can it be eradicated?

Dr. Marshall. I did not say it was an acid. That is what I want to find out. I do not think the taint will develop an acid that will cause this disease. I do think that it lowers the power of vital resistance so that by and by, when the exciting causes come into play, the tooth tissue is more readily dissolved than it would have been had the vital resistance been normal in tone.

Dr. Goodwillie. The causes of this disease are either local or constitutional. Syphilis is *the* virus of viruses. If vitality is so impaired that nature has not the power to assert herself and throw off the influence, some day there will come an evidence of the impression. He has seen the primary, secondary, and tertiary stages developed within a year; and again the primary and secondary would develop within a year, and the tertiary would not show itself for twenty years afterward. He instanced the case of a child five years of age, the father of which had contracted syphilis eighteen or twenty years previous, and afterwards married. The first child of the union was alive, the second and third were dead, the mother was dead, and this child was the first fruit of a second union. He had to remove the whole of the upper jaw. If the child had had vitality enough to go on to maturity before the symptoms were developed, we might have had such marks on the teeth as those in the cast shown by Dr. Marshall—we cannot tell;

but it couldn't throw off the taint, hence came the operation described. We never know when the vice of syphilis has left the system. As to local exciting causes. it may be acidity, it may be galvanic action.

Dr. Horton. The question I asked was, was there not some definite point during the construction of the tooth when nature's processes were interfered with by some specific element. Dr. Goodwillie says there was a disturbing element, and we have the marks of the interference on the teeth themselves. Now, is there any period within which this interfering element performs its work of disintegration. My opinion is that the local disturbances arise during the period of formation of the teeth. My experience is that the development of the denudation may occur at any age —at from sixteen to twenty-one, or from thirty-five to forty,—the last is the most usual age.

Dr. Marshall thought Dr. Horton mixed the constitutional and local causes. In my paper I distinctly stated it was more apt to occur in the mouths of patients who have suffered from the inherited form of syphilis; have seen it in patients as young as sixteen years of age, but in most cases they are above thirty.

Dr. Horton. Would denudation be apt to occur if the patient were inoculated with syphilis after he had arrived at manhood?

Dr. Marshall. I do not claim that syphilis is the exciting cause of the condition under discussion. It is simply a predisposing cause.

A CASE OF AMAUROSIS DEPENDENT UPON DENTAL IRRITATION.

REPORTED BY W. W. ALLPORT, M.D., D.D.S., CHICAGO, ILL.

[Read to Section on Oral Surgery, June, 1883.]

Mrs. L., aged 34 years, of nervo-bilious temperament, and fairly good health, called, in May, 1879, for an examination of her mouth. Found the left first superior biscupid tooth decayed upon the distal surface, but not so extensively as to expose the pulp, or sufficiently near to it to require, in my judgment, special protection. The cavity was filled with gold and the case discharged. In April, 1881, one Sabbath, I was called in great haste to see the patient at her home. The tooth which I had filled had become suddenly very sore, with great pain in the left eye. The patient then explained to me as the reason she had not visited me for a regular examination, as had been her custom every three or four months, a serious difficulty with the left eye, involving partial loss of sight, profuse lachrymal discharge, and severe paroxysmal pain.

Upon examination I resolved to remove the filling, and did so at once. The history is as follows:

For several weeks after the tooth was plugged there was a slight uneasiness in it, with sensitiveness upon sudden changes of temperature, such as were produced by taking hot or cold drinks into the mouth; but nothing so marked as to require, in her judgment, any attention, and these symptoms finally passed away. In about six months after the operation upon the tooth she began to experience pain in the left eye, of intermittent character, increased flow of tears and some slight obstruction of sight. Being in New York soon after the appearance of the trouble, she consulted one of the most eminent ophthalmologists of that city, who, after a careful examination, said he "could discover no local cause to account for the difficulty, and therefore it must be of constitutional origin, though obscure." He prescribed constitutional treatment, as he said "to build up the system."

After faithfully carrying out his instructions for some weeks and getting no relief, she called upon him again for another examination, the result being the same as the previous one, and the constitutional treatment continued.

On returning to Chicago she consulted one of the leading ophthalmologists, who also said he could find no local cause, and that it must be of systemic origin.

The symptoms for months had grown gradually more aggravated, so that she had been obliged to give up reading and writing, as all such efforts would aggravate the symptoms.

In this condition she again visited New York, for the purpose of consulting her oculist, feeling sure that as her general health was good, there must be some local trouble with the eye that had been overlooked. After a third careful and most painstaking examination, he said he could find no sufficient local cause for the symptoms complained of, and that he could do nothing for her, except what might be hoped for through constitutional treatment.

The history of the case was so remarkable, that I was led to make a most thorough examination of her teeth on her first visit to my office after the removal of the filling, and on percussing the tooth that has been referred to, found it slightly tender; and as this was the only tooth manifesting the slightest abnormal condition, I resolved to ascertain the condition of the pulp. On excavating the cavity, I found the bulbous portion of the pulp chamber filled with secondary dentine quite up to a line corresponding to the edge of the alveolus. Above this I found a living pulp in a state of low inflammation. As the instrument pierced the pulp the sensation was communicated to the eye, causing a paroxysm of pain. The patient then stated that since the removal of the filling the pain in the eye had been much less, and the soreness of the tooth was considerably relieved.

After removing the pulp, which I did at once, and treating the tooth for a few days, the pulp canal was filled with oxychloride of zinc cement, and the crown cavity with oxy-phosphate. The case began to improve at once, and in a few weeks the sight was restored to its normal condition, and all the other symptoms had passed away.

Dr. Williams. We often see deposits of secondary dentine where the action seems to be natural. At other times we find it accompanied by an inflammatory action. This case is unique, in going on to fill up the tooth with a secondary deposit to so great an extent without the trouble being discovered or suspected.

Dr. Buffet. In this case there was very little irritation of the tooth—not sufficient to cause special

pain. This you will find true—that in all cases of reflex trouble with the branches of the trifacial, the local trouble will be a low chronic inflammation; even if it is at one time acute, this will pass and it will become chronic. We must look closely for very slight manifestations; it is an error to look only for the greater lesions. Dental nodules are among the most difficult troubles to diagnose. In different individuals we have dental irritation in full manifestation, and the opposite, depending largely upon temperament. Those of full habit need depressants, and those of low habit require tonics.

Dr. Butler. The case is of great interest not only to specialists, but also to the general practitioner; low or slight manifestations is one of the best evidences that it is the result of a chronic rather than an active irritation. Where it goes on slowly we get amaurosis through reflex action. In a case of amaurosis under the care of an oculist in the city, the patient had two superior incisors with decay extending very near the pulp. The irritation kept up and the sight got no better. He (Dr. Butler) made a carefnl examination of the mouth, and came to the conclusion that the trouble with the eyes was aggravated by the condition of the incisors. He removed the morbid tissue and treated the teeth, and in a short time the eyes improved under the treatment of an oculist, who admitted that placing the teeth in proper condition had been of great assistance.

Dr. Brophy thought that an attempt to save pulps which were partially sloughed off or in a state of chronic inflammation was a mistake, and there was often risk of leading to such complications as had been described.

Dr. Marshall. One fact which such cases empha size is that the general practitioner should not ignore a thorough examination of the teeth in arriving at the cause of these reflex troubles. Often the teeth are not looked at by them. Cases may be named of neuralgia arising from irritation of a pulp treated for malaria, the trouble being discovered only on a visit to a dentist. That was one reason why he was in favor of teaching dental surgery in the medical schools—that the general practitioner might have a better idea of dental diseases and their ramifications than he has to-day.

MAJOR AMPUTATIONS AND HOT WATER DRESSINGS.

BY H. H. CLARK, M.D., DANVILLE, ILL.

[Read to the Tri-State Medical Society.]

MR. PRESIDENT AND GENTLEMEN:—Amputation of the thigh or of the arm at the shoulder rank as the most fatal of surgical procedures. The causes of this fatality we shall not stop to consider in full, but simply enumerate such as are specially presented in the cases we bring to your notice to-day, and to which our treatment was specially directed, namely, shock, hæmorrhage and gangrene. I enumerate them in the order of their frequency as occurring in these cases. Shock, more or less severe, is always present. Hæmorrhage, in some form, is not infrequent, and gangrene occasionally presents in civil practice. To prevent these, or they having occurred to abridge their severity, is ever a foremost consideration of the surgeon.

The latter fact has induced me to pursue in all cases of surgery, of whatever magnitude, the treatment to which I would to-day call your attention—hot water applications. And that I may the better illustrate its value, I have selected only my gravest cases, which I will now lay before you.

G. W. K., male, æt. 30.—Gunshot fracture through upper third. Missile conoidal, cal. 44, entered at lower angle of Scarpa's triangle, passed directly through, implicating nerve and artery and badly comminuting femur. Amputation half an hour after receipt of injury. Operation by lateral flaps; bone cut just below trochanter. Hæmorrhage had been very great and the shock was profound, and three hours after amputation he presented the appearance of a man dying of cholera. During the three hours a constant oozing of blood had been going on, until the dressings were completely saturated. Close bandaging had no effect. Cutting the sutures, I opened up the flaps and applied sponges saturated with hot water, which was kept up for one hour. The wound was then closed, hot water dressings applied until complete reaction, which occurred sixteen hours after the operation. Primary union took place, and he was discharged with a perfectly healed stump, on the 12th day of November.

Robt. Reich, March 22, 1865, was caught by driving belt and thrown against a four-foot circular saw making 400 to 500 revolutions per minute. The saw entered at the lower border of left trochanter major, passed obliquely across to origin of tendon of internal vastus muscle, leaving a part of the latter muscle and a little integument intact. The femur was badly comminuted, and the muscles and integuments torn into shreds. After the first great gush of hæmorrhage there was but little loss of blood. The shock was very severe. When I first saw him, at 1 o'clock A. M., March 23rd, he was almost pulseless, and complaining of agonizing pain in the injured limb. Stimulants and morphia had been given per orem, but seemed not to affect him. After injecting three-fourths grain of morphia hypodermically, and giving freely of ammonia and spirits frumenti for one hour without any perceptible change, and believing the pain was the cause of the continuance of the shock, and that the only relief to be had was to remove the large mass of lacerated nerve tissue exposed to the air, I decided to amputate. A hurried consultation with Drs. Schaffer, Eagleson and Williams negatived disarticulation at the hip as certainly fatal, and as the muscles and skin were entirely cut away on the outside of the limb as high as the trochanter, I resorted to the following as the only hope of closing the wound:

Passing the knife in on the outer side of the femoral artery, on a line transverse with the lower border of the trochanter major, I cut squarely out over to the trochanter, carrying the incision down to the bone, and around the limb, until I came to the point where the knife would have emerged had it been carried through from the starting point. I carried the

knife through on inside of femur, emerging at posterior point of first incision, and formed a flap from the tissues on inside of the thigh. The saw was applied obliquely across from the middle of the lesser to great trochanter, and just enough bone removed to form a smooth surface. The lower sharp angle was then slightly rounded off. The difficulty now was to close the wound, with but one flap, and it no greater than is ordinarily formed when we have ample tissues to work with. I overcame the difficulty by cutting out a good part of the muscles, and so letting the remainder fold more squarely down across the stump.

While ligating the arteries, an anomaly of size was noted, the femoral being about as large as a No. 7 or 8 sound, American scale, whilst the gluteal was fully the size of a No. 16 or 17. The ligature upon the latter did not come away until the thirty-fourth day. Primary union on anterior angle; a small slough at posterior, followed by much suppuration; healed in about five months. Five hours after the operation he had completely rallied from the shock and partook of a very fair amount of food, thus corroborating my conclusion as to the pain being the cause of the severe and prolonged shock. I show you a photograph of the results in this case. I only made the amputation, Dr. Schaffer, of West Salem, Ill., had the subsequent care of it.



November 13, 1876, Wm. Paten, æt. 19; scrofulous habit. Four years ago was kicked by a horse upon the right tibia. Abscess of bone followed, involving the head of the tibia, opening into the joint and eventually destroying the articulatory cartilages. Patient very feeble. After a short tonic course amputated above the condyles on November 13. His recovery was very rapid and satisfactory, he being able to go to the table for meals, three week in primary union throughout.

H. L., æt. 26; December 27, 1880; right arm crushed under locomotive engine about three inches below shoulder. Saw him at 2 A. M., arm almost separated from the body. Hæmorrhage very great, but had ceased when I reached him. Shock severe. Stimulants and morphia; operation at 7 A. M. Having fallen upon his back, the flange of the wheel had impinged upon the front and axillary surfaces, tearing away all the soft structure as high as the anatomical neck, while the posterior soft structures of the arm and shoulder were almost pulpified by the pressure to which they were subjected. Forming a flap from the bruised posterior structures and trimming the anterior as closely as possible, I disarticulated and closed the wound; at 3 P. M. he had fully reacted and was resting comfortably. On the night of the 31st was restless, had severe pain in wound. New Year's morning there was a gush of blood, and cold pressure was applied; opium given freely; could not bear the cold, so it was removed. At 9 P. M. the patient promised well, his only complaint being about the amount of pressure. Slept from 10 P. M. to 1:30 A. M., when he awoke suddenly and cried out "I am bleeding!" In five minutes I was by his side, to find him almost pulseless. I instantly applied my fingers to the subclavian, ordered stimulants, and sent for assistance, which arrived in about twenty minutes, Drs. Kimbrough and Taylor responding very promptly. Notwithstanding the contused condition of the tissues union had proceeded very rapidly. Believing that these tissues would slough were I to ligate the subclavian where it emerges between the scaleni muscles, I opened the wound, cleared out the clots and began my search. The ligature upon the axillary artery remained firm. Examining carefully, I found the tissues in the posterior part of the axillary space very soft and sloughy, and easily broken down and .emoved by the finger. Having cleared every thing out I directed Dr. Kimbrough to remove his pressure from the artery, when a clear jet followed from a point well back under the edge of the scapula, which being secured proved to be the subscapular; a ligature was applied close to its origin and pressure removed. After carefully cleansing, the wound was closed. Union mostly by granulation. He was discharged with wound entirely healed in ten weeks from receipt of injury.

December 17, 1882, C. K., male, aged 13, had right ankle crushed by loaded coal-car, at 10:30 A. M. Hæmorrhage continued until syncope occurred; reaction followed by amputation just below tubercle of tibia at 2:30 P. M. Reaction from shock of operation was imperfect, and on the morning of the 30th gangrene was fully developed and had reached above the patella. By use of treatment to be given farther on, a line of demarcation was established, and amputation by oval flaps was made at middle of the thigh on the 9th of January. There was considerable suppuration, but in two months he was about on crutches. A fistula still exists at intra-angle down to the bone, which is slightly roughened. He is very strong at this date.

December 27, 1882, Ross Gallion, a farmer, while assisting to capture a tramp, was accidentally shot through the left thigh, the weapon being a smooth-bore rifle loaded with bird-shot known as No. . As will be seen by the pathological specimen shown you, the shot entered on the front of the limb, at junction of lower and middle third, passing slightly outward, backward and downward through the limb, shattering the femur, and severely lacerating the soft structures. Thirty shot went through, and were found

in the clothing on their removal by the surgeons who were called at the time; as many more were removed from the wound, and nearly as many more remained embodied and entangled in the tissue, and were found while removing the section of femur presented here to-day. From the history given me by Dr. Jones, of Covington, Ind., reaction was prompt, quickly followed by severe inflammation. In view of this latter fact, and that if performed the amputation would have to be high up, a conservative course was decided upon. The limb was put up with weight extension and local short splint. After a thorough trial the patient became intolerant, and they were removed, and the limb from this time to the date of removal was supported on pillows. July 3, six months from date of injury, the following conditions existed: Aside from emaciation and weakness, the patient's condition was favorable—*i. e.*, stomach and bowels and kidneys acting normally. The local conditions were, a very much swollen limb filled with abscesses and sinuses, with a profuse discharge of pus, that was steadily sapping the strength. The tissue had that peculiar cork-like feel of long continued subacute inflammation, indicating grave defects in nutrition of the parts and consequent lowered local vitality.

This local condition involved all the parts of the thigh as high as the trochanter. Every few days a small bit of bone would be discharged from some one of the numerous sinuses, always being preceded by an attack of fever and increase of the pain, the latter being continuously present in some degree. Taking into consideration the great exhaustion, the constant discharge of pus, the frequent appearance of bony structure in the discharge from the wound, the constant and peculiar pain, the three latter facts, coupled with the known opening of the medullary canal, giving undoubted evidence of the presence of periosteo and osteomyelitis and the large amount of structure involved.

The two last being extensive, as evidenced by the condition of the soft tissue close to the coxo-femoral articulation, and the direction upwards of two of the sinuses, a more unfavorable case for operative procedure could scarcely be conceived, especially so as amputation seemed the only one available, and as the only possible chance for recovery. Being a farmer, it was especially desirable that sufficient stump be left for the attachment of artificial support, and with this object in view, and lest it might prove impossible in consequence of the disorganized state of the bone to secure such, the following plan was mapped out and acted upon: To amputate just above junction of middle and upper third, flaps to be oval, and formed midway between a lateral and an anterior posterior flap operation, and saw through the femur. After having the arteries secure, had it been found that the periostitis and osteomyelitis had so damaged the bone as to render its retention unadvisable, an incision from the outer angle of the flap was to be carried up over the trochanter and the remaining section of the femur removed by disarticulation. This was found unnecessary, as the medulla seemed quite healthy, and the periosteum firmly adherent. Seven vessels were ligated, and torsion used upon nine more. A good deal of trouble was experienced in securing the profunda artery, in consequence of the softening of its coats and adhesion to surrounding structures. From examination of section of the femur shown, you will observe that it was not cut squarely across. This very non-surgical appearance was caused by the hard, brawny condition of the soft structures preventing the square application of the saw, no reasonable amount of force sufficing to draw them away from pressure against the back of the saw.

This unyielding condition also rendered the closure of the flaps quite difficult, but by use of very deep sutures and firm pressure with the hands it was satisfactorily accomplished. Drainage was effected by the ligatures being brought out at both angles. There was very little discharge after the fourth day. Union, primary, took place, and the 23d of July he was virtually discharged from supervision. Three weeks subsequently, during a fit of despondency over his helpless condition, he suicided by shooting himself through the head.

We now come to the treatment. Having secured against further loss of blood, I endeavor to relieve the shock by application of hot water to the arms, legs and abdomen, applied by flannel dipped in water at 125° to 140° F. Having obtained reaction and performed the amputation, I apply water as hot as can be borne by the hand, or about 150° to 160°, using sponges, alternately draining water into and by pressing the saturated sponges directly into the wound. After all bleeding has stopped so fully that the flaps can be handled without inducing any oozing, the flaps are stitched home. During the process of closing the hot water is kept draining into the wound freely, so as to keep it clear of all clots and render the contraction of all vessels as perfect as possible. Treated in this way, the tissues become so supple that the most perfect coaptation is effected, and as it were almost glued together. Small cavities or pockets can hardly occur, and the chances of clots forming and becoming a nidus for abscesses, or from decomposition causing septicæmia, is almost annulled.

After closing the wound the water is applied in gradually decreasing temperature until it is applied cold, and until this point is reached no other antigermiside is used, and then it is only applied by means of a piece of muslin, dipped in carbolized water, loosely wrapped around the stump. Adhesive straps or bandages are not applied until removal of the sutures, except in cases where, from unavoidable deficiency of flaps, the strain is too great upon the sutures. In conjunction with the hot water applications, morph. hypodermically, spts. frumenti, and ammonia are made use of until reaction is fairly set up, after which they are laid aside. In the case of amputation at the shoulder, upon breaking up the adhesion, the hæmorrhage from small vessels was very profuse, but was readily and permanently controlled in two or three minutes by pressure with sponge saturated with hot water. In the case of the boy, Kilpatrick, who suffered from gangrene and was exhausted to such a degree that a very moderate loss of blood would have proved fatal, Esmark's bandage

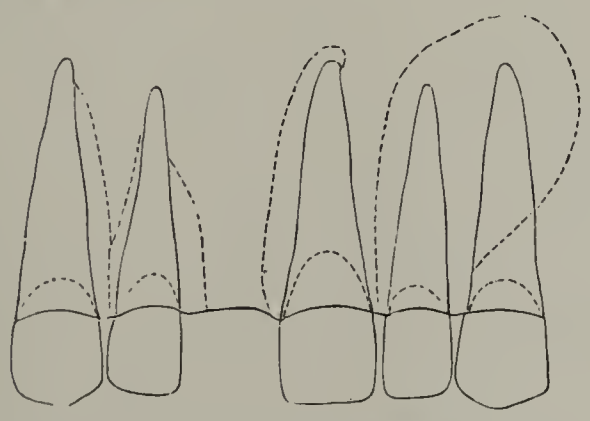
and tourniquet, with hot water flooded into the wound, secured the patient with a loss not to exceed two ounces. Along with hypodermic injection of nitrohydrochloric acid and a forty per cent. carbolized oil into the gangrenous tissues, as close to the living structure as possible, hot water was for three or four days kept constantly trickling over the parts, until a perfect line of demarkation was established. In this, the only case I ever used them, I inserted two drainage tubes, and in reviewing the course of this case I believe they proved a drawback, as the wound united everywhere else by primary union, except where the tubes were inserted. From these points suppuration continued for nearly three months, and at one point a small sinus still exists. As a preventive of septicæmia and pyæmia, I can only say I have never seen an indication of either in any operation where I have used hot water, nor have I ever had an b cess form in the stump, but in view of the results which I have obtained I believe, if properly applied, it will take a fair rank with other, at present, more popular agents.

A REMARKABLE CASE OF PYORRHŒA ALVEOLARIS, WITH REPRODUCTION OF BONE, OCCURRING IN THE PRACTICE OF DR. ALLPORT, CHICAGO, ILL.

REPORTED BY DR. JOHN S. MARSHALL, CHICAGO, ILL.

[In the Section on Oral Surgery, June, 1883.]

Mr. J. B. T., merchant, aged 46, of bilious temperament and fine physique, consulted Dr. A., on Feb. 10, 1883, with reference to a diseased condition of the teeth and gums and a profuse discharge of pus. Upon examination it was found that the right central incisor had been lost about five or six years previously. The teeth were very loose; those most affected were the remaining superior incisors and cuspids. The first bicuspid and first molar of the left side, the second molar of the right side, and the inferior incisors and cuspids and first molars were also affected. The diagram upon the blackboard illustrates the condition only of the anterior upper teeth, the dotted lines representing the loss of bone tissue (alveolar process) as ascertained by the use of a probe passed under the gum and following the roots of the teeth. (See cut.)



On the labial surfaces, the probe passed to the points indicated by the dotted lines around the teeth. In the case of the left lateral, the alveolus on the labial surface was completely gone, and nearly so in the case of the cuspid, only a small septum of osseous tissue remaining near its neck. The palatine wall of the alveoli of these teeth was still intact for the upper two-thirds, and nearly normal in the case of the others. A discharge of pus from around the necks of the teeth was first discovered about two years before, for which he had taken both local and constitutional treatment. When the patient presented himself the exudation of pus was very profuse, slight pressure causing it to flow out freely—at times as much as a half teaspoonful could be abstracted from the large pocket surrounding the roots of the left lateral and cuspid.

There was no history of syphilis, but there was a family tendency to scrofula, and at the time the patient presented himself he was under treatment, and had been for some months, for chronic inflammation of the kidneys.

Dr. Allport treated the case by first carefully scraping the whole of the denuded surfaces of the teeth and the edges of the alveoli with thin, narrow chisels made especially for the purpose. Aromatic sulphuric acid was then applied to the apex of each tooth by the aid of Farrar's syringe, the first application of full strength, afterwards one part of acid to three parts of water, the case being treated every day for a week. Later the acid was discontinued and glycophenique of full strength substituted, the patient reporting three times a week. Treatment was begun February 23, 1883, and on May 11, 1883, the case was discharged cured. The attachment of the teeth to their sockets was firm, and there seemed to be a new deposit of osseous tissue around the roots of the teeth. The gums have receded, though to no great extent, as will be seen by the dotted lines across the teeth in the diagram.

Dr. D. H. Goodwillie, of New York City, remarked on Dr. Allport's paper as follows:

"This case of Dr. Allport's, from the history he gives, is, without doubt, one of repair by new tissue, both osseous and fibrous. Wherever the periosteum was preserved a new osseous tissue was formed; and in the more internal parts, where there is no bone reproducing membrane, the new deposit was fibrous.

It is a well established fact that bone reproduction is produced principally by the periosteum and soft tissues, so that wherever this membrane is preserved in the removal of necrosed bone there will be reproduction when the conditions are favorable to it. Such conditions are, first, a careful preservation of the periosteum and soft tissues. Second, good free drainage, and a thorough and constant cleansing by irrigation. Even the normal secretions of the mouth, if they are left long enough, become abnormal and prevent the new bone forming process. Third, to have external support when necessary, in order to prevent motion and to secure the desired shape of the new bone. The general health of the patient to be put in the best possible condition.

Dr. Goodwillie. Was there any examination to determine the condition of the pulps? Were they dead or alive?

Dr. Marshall. No special attention was paid to this point, but the presumption is that the pulps were dead.

Dr. Talbot could hardly credit the possibility of

such a case were not the evidence so strong. We all know that the tendency of the alveolar process in these cases is to recede. He has seen no cases in his own practice where it was reproduced after having once been disintegrated; he has seen it contract and still keep the tooth in place, but he could not understand how it was possible that reproduction of the bony tissue could be brought about.

Dr. Marshall was glad that Dr. Goodwillie had brought up the subject of alveolar abscess simulating catarrh. A case of this character which had come under his own observation was that of a gentleman aged 30 years who had been under treatment for catarrh for a year and a half. Coming to have his teeth cared for, the central incisor on the right side was found to be devitalized and tender; it always gave trouble whenever a cold was taken. It was also noticeable that the catarrhal discharge was always from the right side. He opened into the tooth and found, after cleansing it that water could be forced through it into the nostril. The tooth was treated, and with its cure the catarrhal trouble disappeared. Another young man—a student of dentistry—had an incisor which had been devitalized by his preceptor. It was neglected, and an abscess formed. He also had a discharge from the nose. On examination the condition of the incisor was discovered, and on its being treated the nasal discharge disappeared.

Dr. G. S. Shattuck, Detroit. In the case of pyorrhœa alveolaris reported by Dr. Marshall, was there any deposit of tartar?

Dr. Marshall. Yes. The scraping of which I spoke was performed several times, and was quite painful.

Dr. Truman W. Brophy, of Chicago, had seen this case while it was under treatment—the results achieved were certainly remarkable, and were to be attributed not only to the skill with which the case was treated, but to the vigorous condition of the patient. There is now not a vestige of suppuration; the gums are pink and the teeth firm in their sockets, which seem to be thoroughly restored. As a rule, teeth in the condition in which these were when the patient presented for treatment would be lost, it being only a question of time. The results reached here should give us encouragement to make the attempt at cure even where the case presents formidable obstacles. In connection with the treatment of alveolar abscess, Dr. Brophy commended the use of peroxide of hydrogen, much is claimed for it; it has the most marked antiseptic properties—even more so than carbolic acid. This is carried into the sac, and immediately following its introduction a foamy mass passes out. This is due to the oxydizing action of the drug on the decomposing fluid in the sac and to the destruction of the bacteria. The use of sulphuric acid has been criticised by some. The speaker has had good results in his own practice, and regards it as an excellent remedy. It destroys the necrosed bone, but acts only slightly on healthy tissue.

Dr. Shattuck had been treating a right central affected with pyorrhœa aveolaris. The anterior plate of the alveolar process was all gone, and a probe could be passed to the apex on the anterior surface. Treatment was dilute aromatic sulphuric acid once in twenty-four hours, washing clean with water twice a day.

Dr. E. C. Briggs, Boston, questioned the correctness of the statement that new bone had been produced in the case reported by Dr. Marshall. The only evidence of a reformation of bone is the feeling of hardness of the gum and the firmness of the teeth. This is hardly enough. There was no periosteum left to reproduce the bone, and that result seems impossible under the circumstances. He had had a case in which the alveolar process, from the superior central to the third molar, was affected, resulting in the loss of the whole of the outer plate of the alveolus and a portion of the inner. After removal of the necrosed bone, the soft parts were stimulated, resulting in the complete filling up of the space occasioned by the loss of bone. The gum presented a natural appearance, with the exception of one slight depression back of the canine, and felt as firm and hard to the touch as before. In this case, Dr. B. was positive there had been no new bone formation.

Dr. Marshall was inclined to think that in the case he reported the periosteum was lifted from the bone, not destroyed, and thus was able to assist in the new formation.

Dr. C. R. Butler, Cleveland, could see no reason why Dr. Marshall or Dr. Briggs should be at a loss to ascertain the condition about the roots in the cases they had reported, or to decide whether the formation was cartilaginous or osseous. The exploring probe would determine the matter surely to the educated touch, with only slight pain to the patient. It does not follow that the pulps were dead, even with the amount of suppuration reported in Dr. Marshall's case, though it may be safe to say that they were dead in many such cases. That should be one of the first points to be determined. We may get contraction of the tissue about the necks of the teeth, sufficient to hold them firmly, where the transverse septa are lost, even when the cancellous portion of the bone has been dissolved out. You cannot have abscess or death of bone wthout suppuration. That is nature's method of getting rid of it. Many overdo their treatment by washing out too much, but more err on the other side by not cleansing as much as should be done. He regretted that we had not a clearer diagnosis of the case. If the bony sockets have been restored, as has been reported, we ought to have some better knowledge of what the evidence is.

Dr. Talbot thought such cases should be managed on the general principles of treatment for carious bone in any part of the body. The necrosed bone should be cut or scraped away or otherwise got rid of, and then reproduction of bone can take place.

Dr. Marshall. I will have the teeth examined on my return to Chicago, and will forward to the *Dental Cosmos*, in time to appear with its report of this meeting, a statement of the condition of the pulps of the left lateral and canine; also, the result of the examination into the character of the new formation in the sockets.

We have pleasure in presenting the following from Dr. Marshall:

To the Editor of the Dental Cosmos:

Dear Sir:—As I promised the members of Section 7, of the American Medical Association, I send you the result of the examination made by W. W. Allport and myself of the case of pyorrhœa alveolaris (reported by me for Dr. Allport) relative to settling two points, viz: *first*, if there was really a *new formation of bone* about the roots of the teeth, and *second*, if the left lateral incisor and cuspid were *still vital*. In regard to the *first*, I would say that an exploring needle was passed through the gum in four different places over the roots of the teeth mentioned and between them. In each case it met with *firm resistance* giving evidence to the sense of touch of being bone tissue.

To the second would reply, that on applying a piece of ice the patient exclaimed: "I could have told you that without hurting me in that style." The teeth are quite sensitive to the application of cold, and the color is normal, so that *there can be no doubt about their vitality*

Inasmuch as Dr. Allport is positive that he passed his instrument entirely over the ends of these teeth and scraped and smoothed them there in his treatment of the case, there can be no doubt that the pulp connection at the apex was severed. Now arises the question, how can we account for the vitality of these two teeth? Has there been a union—which is very improbable—of the vessels and nerve and pulp at the apex? Or is the vitality maintained, as Dr. Allport believes, through a vicarious function of the pericementum? The latter view seems to be the most probable explanation of the phenomena, for it has been demonstrated beyond doubt that vessels sometimes penetrate the cementum and dentine, and anastomosis is established between the vessels of the *pulp* and pericementum. Canals for the passage of the vessels have been demonstrated out of the mouth. Dr. Barrett, of Buffalo, N. Y., demonstrated incidentally the fact of their presence while experimenting with a solution of gutta-percha and chloroform as a filling for pulp canals. He found that it penetrated not only the most tortuous canals, but passed through certain canals in the sides of the root having an external opening.

JOHN S. MARSHALL.

Dr. Talbot had had two cases of septicæmia as the result of neglected alveolar abscess. The first was a married lady aged thirty-five. When she went to the seashore some years ago she was suffering from a severe toothache in the left first superior bicuspid, for which she had called upon a dentist. He diagnosed a dead pulp, and the tooth was bordering on alveolar abscess. He drilled through a filling to the pulp-chamber, and treated temporarily, advising her to have it treated properly on her return to Chicago. Having no further pain, she declined to do so for two years. Her health began to fail, she had no appetite, and finally became unable to retain food on her stomach, nourishment being injected per rectum. She had frequent violent fits of vomiting. Last summer she was advised to go to the seashore, where she remained two weeks, when there was considerable swelling of the face—the first thing noticed in regard to her teeth since her troubles commenced. She was sent to me, and, on removing a piece of cotton from the cavity in the tooth the dentist had treated two years before, a most offensive odor issued. She had a vomiting spell in the office, and afterwards was confined to her bed for two weeks, when she commenced to recover. He visited her two or three times a week to cleanse out the cavity. In three or four weeks she commenced to rally, and now at the end of six months her health is completely restored.

The second case was a young lady who called September 7, 1882. She was anæmic; had no appetite; her eyes had beeu treated for two years for conjunctivitis, without relief. The gums were in an œdematous condition, saliva ropy and mixed with pus; pus discharging from the gums, and also from eight abscesses in different parts of the mouth. Upon exploring a fistulous opening at the margin of the gum between the roots of the left lateral and canine, caries was found to have extended into the antrum as far as the floor of the orbit. Two years previous, while undergoing a dental operation she took offense at her dentist, and since that time nothing had been done to her teeth. Treatment was commenced by removing all foreign substances from the necks of the teeth, cleansing the canals of the teeth with abscesses, and injecting carbolized water into the opening in the jaw; tonics were given to aid digestion. At the end of three months the teeth were in a healthy condition; patient had also improved slightly in appearance, and attention was directed to the carious bone. A tent of cotton inserted into the fistulous opening between the lateral and canine to enlarge it caused intense suffering; patient's face was swollen so that one eye was closed, and the flesh had a bluish cast. The tent was removed and the accumulation of fetid matter evacuated. Morphia was administered to quiet the pain, but there was no stop for thirty-six hours; pulse was high, temperature averaged over 100°. Her family physician attended her with the speaker, and at the end of three weeks she was able to resume her visits to the office. The cleansing process was continued, and in March patient was so much improved that she was sent east to spend the spring months.

Adjourned.

Dr. Henry Barnes, Cleveland, O., said: A married lady, aged about 40 years and mother of six children, came to my office some seven years since. I found a deep groove commencing at the cervix of the superior cuspids on either side and involving all the teeth on the buceal surface, back to and including the second superior molars. This groove, from its point of commencement at the cuspids, gradually and uniformly widened and deepened along its course, the depth corresponding with the width, and about this shape  and size in proportion. About three years since the eldest girl, aged 18, died of consumption, and this spring another girl, aged about 17, also died of the same disease. I do not know of any other hereditary taint in the family. In appearance they are all healthy and robust.

I have not seen the case since that time, and therefore can not report as to its progress. The surfaces of this groove were polished like glass and were translucent, and, to the touch of an instrument, as hard as enamel. I may also add that in the approximal surfaces of all the back teeth, upper and lower, were large amalgam fillings, while gold in front. These had been in for many years. The teeth were good and strong.

CATARRH OF THE ETHMOID CELLS AND THE FRONTAL SINUS AND THE NASAL CANAL—THE CAUSE, DEPOSIT OF EGGS OF THE SCREW MAGGOT (LARVÆ) AND THEIR DEVELOPMENT.

BY FRED. HUMBERT, M.D., F.C.S., ALTON, ILL.

Mrs. F. W., a farmer's wife, always enjoyed good health. On Monday, September 27, 1875, about noon, she was attacked with headache, flushed, burning face, and expected a malarial chill. From that time the pain in the region of the frontal bone,at the root of the nose and below the eye, extending to the right ear, increased. At times the pain was more severe than at others, but never entirely left. These pains were described as dropping, tearing and boring, and so excruciating were they that at intervals, day and night, her cries could be heard at a great distance from the house. Tuesday evening bloody mucus began to run from the right nostril, which was some swollen. This swelling extended on Friday over the whole right side of the face. On this day, the fifth of the complaint, four larvæ dropped out of the right nostril. When I was first called to the patient, October 4, only the right lips and nostril were swollen, the acrid discharge having somewhat blistered the lips below. On introducing the probe into the right nostril it was impossible to pass it to the posterior nares, but it moved with an unusual freedom in the direction of the frontal sinus and cells of the ethmoid. In this direction it would pass to the depth of three and a half inches. The patient lying on her back, head slightly elevated, I injected one ounce and a half of carbolic acid solution, which was retained. When I asked if the fluid passed to the pharynx, she replied: no, but that it was running back and forth in her head. After the injection of an ounce and a half more, the solution mixed with bloody mucus began to flow from her right anterior nostril. This discharge was of an exceedingly offensive smell. After each such discharge maggots dropped from the nostril.

From Monday, when I first saw the patient, this bloody mucus decreased, but the larvæ continued to drop from the nostril. These larvæ dropped out from four to fourteen at a time, till on the twelfth day one hundred and forty or more maggots had thus come out. Each maggot was alive, matured, and seemed to drop so as to find in some sheltered spot a home till fully developed into the fly. On the eleventh day the injected fluid for the first time passed out of the posterior nares, and nearly as clear as when injected. On the thirteenth day soup and drink regurgitated through the nostril. Her speech, which had been perfectly natural, now became scarcely audible from paralysis of the palatine muscle—an affection so often observed in diphtheria. In this distressing malady sleep never came to the patient's relief only at five minutes at a time. The system was well supported. The cavity was washed out with carbolic acid solution, and snuffing warm water, and steam drawn up through the nose; the face and forehead was enveloped in towels wrung out of hot water, which relieved her very much. The fear expressed in the words, "The worms will eat me up!" had to be assuaged by explaining to her the nature of this maggot—that it was not a worm. Through these means some relief was afforded the patient. No narcotic in large doses was administered, fearing lest during sleep the the secretion or maggot might pass into the pharynx. The larvæ were three-fourths of an inch in length, except a few that seemed one line or more shorter and a shade whiter than the others. They were of a yellow hue, conical shape, and had attached to one end, which was more pointed than the other, two horn-like hooks. With my small glass I could count ten distinct rings. Into the meatus nasium medium, the sinus frontalis, the two anterior cells of the ethmoid and the sinus maxillarious opens. Thus the nasal cavities are connected with six sinuses, three on either side. The labyrinth of the ethmoid consists of cells of the finest structure, separated hy thin walls of bone covered with periosteum or simply a layer of mucous membrane. The whole is of a spongy-like structure. When the probe was introduced into the right nasal cavity it moved with great freedom, without pain, in any direction, to the distance of half or three-fourths of an inch below the frontal sinus. It was evident to me that the cavity of the frontal, and more especially that of the ethmoid, was largely dilated,permitting this free movement of the instrument. Evidently the slightest force would haye passed the probe into the base of the brain. The fly that laid these eggs must be a species of the ostreus, which deposits its eggs in the noses of sheep and goats, and when developed into larvæ pass up into the frontal sinus of these animals, while other or the same larvæ from a fly pass into the fauces of the deer, into the sluish of horses, or into the wounds or bruises of cattle. Others deposit their eggs on the point of the hairs on the shoulders and legs of the horse, whence they are licked up and carried into the stomach, where they develop into bots. But no one has seen this fly, which lays its eggs in the nose of man in this or more southern latitudes, and which produces the screw-worm (larvæ).

Before 1850, a fly often appeared in warm days in September (after a wet season) in the heavy timber in the American Bottom, between Alton and St. Louis. The teamsters, during their journey through this timber, rubbed the sluishes of their horses with pennyroyal to protect them from this fly, but at that time there never was a fly known which laid its egg in the human nose. A farmer told me that his father, who drove a government team in 1845 from Arkansas to a fort in the Indian Territory, frequently told him that on approaching the Texas line they dared not sleep at noon in the open air, lest a certain fly should deposit its egg in their nostril. Lately a lady told me (when we were speaking of the below reported case) that her uncle moved in 1846 from Indian creek, in this county, to Texas, near the site of the present city of Dallas, and that his and several children of other families died from screw worms, which a fly deposited in their noses, and that they had to remove to other parts of Texas, as they could not let their children sleep in the daytime. Monday,

September 18th, 1882, I was called (in consultation) to see a woman who lived near where the former case occurred. I found her under the effect of morphine. She was unable to hear, or feel any pain. She had at that time discharged 180 maggots from her nose. There was a swelling on each side of the nose, over the union of the cartilage and bone. In the middle of each swelling, which fluctuated, there was a small opening about a tenth of an inch in diameter. I think the maggots, when small, entered one of the openings of the mucous glands, and after maturing, being unable to return through the same channel, as the opening was closed, they then bored or ate through the cartilage and located between the cartilage and skin. I united the holes in one to give them a free passage, and a free discharge to the acrid ichorous fluid there collected. Four maggots came out of it. Before they ceased coming over 300 were discharged from her nostrils. I believe that two flies, at short intervals, deposited their eggs. The attending physician at that time told me that one Dr. Wadsworth had had, two years before, a similar case, with worms discharged. This case was some two miles from Collinsville, in this county. The patient discharged sixty and died. Two weeks after a negro north of Upper Alton suffered in the same way. His physician told him the worms would eat into his brain and he would die, but he recovered. These four cases occurred in Madison county.

The fifth case is reported in the Missouri *Republican* as follows:

The wife of a Baptist minister, nine miles north of La Cygne, Kansas, has died from a strange ailment, at the age of about fifty-five years. She was a sufferer from catarrh for a long while, and by reason of this disease her nose became much impaired. Lately the inside of her nose and parts immediately surrounding the nasal organ inside the head became filled with parasites, and she endured great pain in consequence for eight days, after expiration of which time Dr. B. G. Mendenhall, of this city, had *succeeded* in removing the *last* of a large number of parasites, but she survived only forty-eight hours. (The italics are my own.) I took from the last case, September 18, 1882, twenty-five living maggots, filled a glass jar half full with soil and dropped them on it. They crawled, screw-like, in five minutes into the soil. I then covered the opening with white domestic, hoping that next year they would come out of it as flies; but on October 6 there were fourteen flies in the jar. Reckoning from the time when the patient first felt the pain, it took thirty-nine days for the development of the fly. The fly is about four times as large as an ordinary house fly. The body is a dark glistening green, the eyes of a bronze color and the face yellow. I sent four flies and several maggots to Professor C. V. Riley, of the Smithsonian Institution, at Washington, D. C., for examination and identification. To this day the fly which lays its eggs in the nose of man was not known, but the worms which came out of the nose of animals were known to the ancients, as they believed that the disease called staggers, or turning fits, in sheep, was caused by maggots in the frontal bone, as shown in early history.

"No doubt this is why the ancients believed that the larvæ from the sheep's head were an effectual remedy in epilepsy. Of course they were prescribed on the principle that what produced a disease will cure that disease. As early as 560 B. C. Alexander Trallianus tells us that at two distinct utterances the Oracle of Delphi recommended these worms to be used by Democrates of Athens, who suffered with epilepsy." Look at the sage utterances:

> "Quas madidis cerebri latebris, procrecase capella,
> Dicitur humorus, *Vermem de Vertice* longum.

The other:

> "De grege sume capræ majoris vuvis alumnæ
> Ex cerebro *Vermes; Ovis* dato tergora circum,
> Multiplici vermi pecoris de fronte revulio.

"But as Democrates knew nothing of natural history he asked a man 100 years old, who told him to take the worms which fell from the nose of sheep, tie them in a bag and hang it from his neck." Okens Naturgeschichte, 1835, B. 5, page 77. There is truth in the adage, "There is nothing new under the sun." The priestcraft, preaching through the oracle of Delphi to the people: "The cause of the sickness will cure the sickness," repeats itself in our day in the oracle of Hahnemann, the father of homœopathy, "remove a natural sickness with such remedies as would produce a similar sickness." (*Similia similibus.*) Organ der Heilkunde v Samuel Hahnemann, Dresden, Leipzic, 1833, Pref. page 8. Is there not a striking similarity between the utterances so far apart in time, when seen in the following plain focus, 560 B. C.—"cure the cause with the cause"—1883 A. D.—"cure like with like." Strange that in our enlightened time, when science in all branches of learning has given us such valuable and practical information, that there still remains in some of our highly educated, and, in other respects, so practical citizens, that mystical belief of our dark age, as stated in the garb of homœopathy.

Dieffenbach, in Rust Handbuch der Chirurgie, Berlin and Vienna, 1830, book one, page 203, in an Artical Abcessus Sinus Frontalieum, says: "In some cases insects have been seen to come out of the sinus frontalis, accompanied with great pain in the frontal bone." He mentioned that Burreus de Kanefield in his Institue Medicine Practice, volume 3, section 7, year 1810, collected several cases. The American Encyclopædia, volume 8, page 296, says the musidæ maggot belongs to the m. domesticus vermilacia or S. carnavia which infest the human body, and many cases since recorded in medical journals. The description of the parent of this maggot and their habits are very different from the cases as reported in the books. There has not been in the last fifty years (or further back) a case known in this country where they have been noticed in them, in so thinly settled a country (though observed south) that a living man in life turned into worms. After I had penned the above I received from Professor C. V. Riley, of the Division of Entomology, Smithsonian Institution, an answer to the letter I wrote him when I forwarded the flies and maggots, in which he says: "I am glad to get the fly, as there has been some doubt as to the real parent of the screw worm. These spec-

imens prove to be the lucilia masellaria of Fabricius. See foot note.[1] It is, moreover, interesting to hear of it from Illinois, as it has been considered as essentially a southern insect.'' He also sent me a page from the *American Entomologist*, December, 1880, in which he says: "A particular fly bit a lady on the nose. A few days afterwards it was discovered that screw worms had formed and made their way under the eye to the brain. Physicians administered calomel, arsenic, etc., and that two hundred worms were discharged. 2nd. Doctor Eaton recently extracted over two hundred from the nose and head of a Mexican boy. Thanks to the doctor's skill, the boy recovered.'' Professor J. P. Stelle, one of the agents of the U. S. Entomological Commission, says "that pyrethum is a never failing remedy for the screw worm. The application is made by simply dusting a little powder on the sore. The worms are air breathers, and it soon causes them to die.''

This is so far good for wounds and bruises, but when the maggots have burrowed high up in the ethmoid cells or frontal sinus if we blow the powder up into the nose we cannot reach them. How can it penetrate the compact mass of two or three hundred maggots? All the laudation that doctors succeeded in extracting them shows merely that they claimed for themselves what belonged to this maggot. As I said before, when they are fully developed they drop and seek another field, the earth, for finishing the metamorphosis. They are not worms which have sexual organs and multiply. They only nourish themselves from the blood, like leeches, and when grown, leave. It is, therefore, very important that this strange and terrible disease should be well understood. That there is no way of abating it, as the maggot's skin is horny, and any chemical applied direct upon them would destroy the mucous membrane and the much dilated bone before it would affect the maggot. Carbolic acid solution, of moderate strength should be injected, to free the cavity from the fœtid, acrid mucous secretion, to relieve the pain, and to prepare a free egress of the maggots. Warm water applications and a just use of chloral are far the best. Olive oil, injected in large quantities to cover the openings between the rings through which these maggots breathe, may effect their early expulsion. But one of the most important things is to make the patient acquainted with the nature of this insect, that they may not, as reported in the New Testament of Herod: "Eaten of worms and died, because he arrogated to himself divine honors.'' The discharged maggot must not be thrown upon the ground, but be destroyed by fire.

[1] This cannot be the true name. Accidentally the Scientific American of October 13th, 1883, came into my hand, in which my letter of October 7th, 1882, to the Smithsonian Institute, with Prof. C. V. Riley's report, copied from the proceedings of the U. S. National Museum, are printed, and which contains many inaccuracies One of the most important, the Professor made me say: "The head is dark, glistening green, a bronze face, etc.," when I said the head is of bronze color, with a yellow stripe in the middle, the body glistening green. Scientifically, I should have said, the eyes are of bronze color, the face yellow (orange), the body glistening green.

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

CONGENITAL ECTOPIA OF THE HEART.—MM. Sappey, Vulpian and Marey have made a lengthy and interesting report as a committee appointed to examine this singular form of malformation to the Paris Academy of Medicine (*Bulletin*, tome XII., No. 42). The subject was a woman in whom the sternum was bifid, the linea alba markedly thinned down to the umbilicus, and the diaphragm divided in its anterior portion so as to allow of the beating of the heart under the hand, only separated from it by a thin layer of the soft parts covered by a lax, wrinkled and pigmented skin. The ventricles were small, their long axis being directed vertically, hanging towards the abdominal cavity, In palpating the epigastric region above an umbilical hernia, an intestinal protrusion was found of a circular form and of about 7 centimeters diameter. Above this was the triangular space in which beats the heart. This space is limited above by the sternal fissure, to the sides of which descend in diverging the costal cartilages. The superior portion of the sternum remains intact, in a length of 8 centimeters; the triangular space is limited inferiorly by a fibrous band, which forms the superior border of the intestinal protrusion mentioned.

The whole of the ventricular portion of the heart can be explored and seized between the fingers. Auscultation showed a nearly normal action, there was a systolic souffle quite intense and prolonged, seated at the base of the heart, and apparently due to a narrowing of the aortic orifice; the antecedents of the subject disclosed none of those diseases which ordinarily produce organic affections of the heart. The sense of touch established beyond doubt the fact that, at the moment the ventricles diminished in size and hardened, the finger was strongly pushed upon, and that it is the systole which produces the heart beat. This phenomenon was noted not alone at the apex of the heart, but throughout the whole superficial area of its ventricles from the apex to the auriculo-ventricular septum.

Two clinical polygraphs were applied, one to each ventricle, and gave a perfectly synchronous record, which differed only in amplitude, the pulsation of the right ventricle being the most feeble, on account of the lesser degree of pressure exercised upon the blood in that cavity. This synchronism continues during the disturbances of the heart from different causes. The simultaneous inscription of the changes in volume of the ventricles and of their pulsations was effected by means of a funnel-shaped vessel which was made to enclose the ventricles and act through the influence of the contained compressed air upon the recording levers, while an explorer of the pulsations was applied to that part which remained outside of the vessel. In the first period the ventricles changed their form and became less hard, the ventricular mass took an elongated form, and pressed further into the vessel; in this period the blood did not escape from the ventricles as is shown in animals by marking the

degree of pressure of the blood in the ventricle and aorta. The second period establishes the evacuation of the ventricles, diminution in volume of these organs, and the period of pulsation. The third period established a post-systolic repletion of the relaxed ventricles, and showed that the repletion commenced as soon as the systole was finished.

The aorta was readily reached and compressed through the thinness of the linea alba, and two tracings were taken simultaneously—that of the femoral pulse and the pulsation of the left ventricle. The pulsations of the heart were slightly diminished and their form modified so as to show an increase of resistance on the part of the ventricles at the end of their systole. When the compression ceased, pulsation in the femoral recommenced, the heart was much accelerated in its movements, and the pulsations were feebler.

The positive tracheal pulse was well marked. This name has been given to the pulsation produced by holding between the lips a tube leading to the registering tambor, when a tracing is produced, in a subject of normal conformation, that is synchronous with the heart beat, and is formed by the movements of the air entering into and passing out of the lungs, under the influence of the heart, as, when the ventricles are emptied, the heart occupies less space in the thoracic cavity and creates a vacuum, which provokes an *entrance* of air through the trachea. Furthermore, the blood with which the right ventricle distends the pulmonary artery and its vessels displaces a certain quantity of air, which tends to pass *out* of the lung. In effect, the force of aspiration predominates, making the tracheal pulse negative. But when there is a solution of continuity in the thoracic walls, the lungs are no longer under the influence of the change of movements of the heart, and the tracheal pulse becomes positive in recording the result of the penetration of the blood into the branches of the pulmonary artery—that is to say, an expulsion of air with each systole of the ventricles.

These observations sufficed to show, in the opinion of the committee, that the results of physiological experiments, made upon the larger mammalia, can be perfectly applied to the knowledge of the mechanism of the human circulation.

Animal Rotation.—M. Delaunay has given some curious results of his study of this subject, in a communication to the Société de Biologie (Comptes Rendus). He finds that certain animals always turn to the right, while others turn to the left, others indifferently to either side. In the human species, however, he finds a peculiar condition of things. M. Delaunay calls rotation to the right the movement in which the right shoulder is carried backward while the left is carried forward, rotation to the left being the opposite. Either foot is used in a certain proportion, as in the waltz; but when the individual turns round several times without changing his place, he does it on his right foot if he turns to the right, and on his left foot if he turns to the left.

Certain of the inferior races of men do not rotate, as the Canaques and the Negroes. The middle races turn to the left, as the Chinese, Japanese, Turks, Brazilians, Mexicans, Araucanians, Kalmuks. Others turn both ways—Hindoos, Moroccans, Tunisians, Transylvanians. The superior European races turn to the right; however, the proportion of individuals turning to the left is considerable in Portugal, Spain, Greece, and also in England, Italy and Germany. In Hungary the *sezardasez*, the national dance, which was danced to the left in the time of Charlemagne, is to-day danced to the right.

In France, in all the national dances rotation is to the right. All treatises on dancing proscribe turning to the left as contrary to usage and propriety. The teachers of dancing who teach rotation equally to either side, declare that their pupils become dizzy sooner when they turn to the left. Ballet dancers execute their feats most effectively on the right foot. The left foot and leg are so far wanting in this facility, that they have to be exercised to double the amount in preparing for the ballet. Women, according to M. Delaunay, as a rule turn equally well to either side, and many prefer rotation to the left, so turning when they dance with each other.

Children turn at first to the left; then as they grow larger they turn to the right. In 68 children of from 3½ to 7 years of age, 38 turned to the right, 19 to the left, and 11 indifferently. At 10 years of age they turn generally to the right. The children which turn to the left are weaker than the others. The great majority of idiots turn to the left. Those who are left-handed turn more readily to the left.

The conclusion of all this is, that rotation to the left being controlled by the right cerebral hemisphere, it predominates in the inferior races, in women, in children, and in the weak-minded. On the other hand, the left cerebral hemisphere, which controls rotation to the right, predominates among the superior individuals—men, adults, and persons of intelligence. M. Delaunay intends to carry this study further into various movements, the sensations, and even into the moral and intellectual faculties, as expressed by muscular movements on one or other of the sides of the body, but never on both with the same degree of intensity.

OBSTETRICS AND GYNÆCOLOGY.

A Pomade Pot in the Vagina for Four Years. —Extraction.—As a companion article to the one reported in this journal (No. 18, Nov. 10) on the extraction of a pomade pot from the rectum, we give the following as reported by Dr. Aubeau in the *Gazette des Hopitaux*. We see by these notes that the excessive fondness of our French neighbors for pomades does not confine itself to the use of the preparation simply, but extends also to the vessels which contain it:

The case in question is that of a young girl twenty years of age, small, ill-looking, and apparently at the last stage of anæmia and emaciation, affected with extreme nervousness, occasioned not only by her feeble and suffering condition, but also by the general reprobation of which she was the object. Accustomed from infancy to vicious practices, when fifteen and one-

half years of age she introduced a pomade pot into the vagina. Once beyond the vulva, it became impossible to remove it. She kept this secret until vaginal catarrh, suppression of the menses, obstinate constipation, rectal and vesical tenesmus obliged her to confess. Two years and a half later a physician attempted its removal, succeeding only in breaking off fragments from the edges of the pot. Other attempts were made during anæsthesa, resulting in a slight hæmorrhage, severe pains and the discharge of urine from the vulva.

She declared to Dr. Aubeau that the pot was small, cylindro-conical in shape, and introduced by its smaller end. The appearances as observed by him were such as might be expected from the previous history, of extreme irritation to the external parts. The hymen was seen to be partially preserved. By vaginal touch a foreign body was felt a phalanx high in the vagina—hard, solid, a little roughened, and giving the sensation of a phosphatic vesical calculus. On attempting to remove it, it was felt to have swollen behind the pubis and ischiæ, to have become spheroidal and to be wedged into the cavity, pushing the rectum backwards and the bladder forwards. In effect, the vagina was filled with an inmovable calcareous mass, in size and shape like that of a duchess pear. At no point could the smooth and polished surface of the glass be felt. Its consistency was found to be friable like plaster, and accordingly, by the means of dressing and artery forceps, a spatula and a cautery in the shape of a spoon, Drs. Aubeau and Lefebure, in the country village where she lived and where more suitable instruments were not obtainable, proceeded to remove it. In about a half hour they had scraped their way down to the pot itself. Then, by applying a crown of artery forceps to the edges so as to protect the mucous membrane, and separating and protecting the lips of the vulva, by carefully drawing upon it they succeeded in the removal of a pomade pot four centimeters in diameter and six centimeters in length. The operation occupied an hour and a quarter. When the vagina was completely emptied, its overdistended walls did not immediately contract and enabled them to find the uterus, although pressed very high up to be healthy, and a small perforation through the vesico-vaginal septum on a level with the neck of the bladder. From this time everything progressed favorably. A month later the vesico-vaginal fistula was treated with success. The menses returned, and four months later the patient married. Now—four years since the removal—the patient is in a very satisfactory local and general condition, inclining to be not only stout but obese.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

POISONING BY AN INFUSION OF FORTY-FIVE GRAMMES OF THE LEAVES OF DIGITALIS. RECOVERY.—Dr. Antonin Martin (*Le Courier Médical*) reports a case of this character to the Society of Medicine, of Paris, in a man 40 years of age. He remained for twenty-two hours after taking the drug without medical aid, and was under treatment for two weeks. The dose taken was equivalent to an infusion containing 0,040 milligr. of digitaline. The first symptoms were those of irritation of the stomach and intestine, but the symptoms produced by the action of digitalis upon the nervous system did not appear for forty-eight hours. The pulse rate was reduced in the first twenty-four hours to 25 per minute; second day, 29 to 35; third day, 40—remaining about this rate for several successive days; but when the patient was discharged at the end of the two weeks his pulse rate was only 48. Dysuria was marked from the first, the patient urinating three or four times an hour, and only a few drops at a time for the first twenty-four hours; later, the secretion was more abundant, but the dysuria continued for a week. Marked aphasia was present from the fourth to the eighth day, when it disappeared. On and after the second day severe cephalalgia set in, which persisted for eight days. The affection of vision was marked and peculiar; there was:

1. A diminution in visual power for near or distant objects, as shown in the want of ability to read a newspaper, except its title, and the inability to read a sign 30 centimeters high, at a distance of 50 meters.

2. A modification in the vision of colors—the patient saw everything *green*.

5. A vacillation of small objects; the letters oscillated.

4. A certain deformation of objects, and particularly their inclination to the left to about 45°. The letters on the signs were bent to the left, and the windows, equally bent, seemed lozenge-shaped.

The visual disturbance continued for fifteen days. Before and after the poisoning the vision was normal, and the ophthalmoscope failed to detect any lesion on the twenty-fourth day.

SURGERY.

SYPHILIS IN THE MONKEY.—M. Martineau presented to the Société Médicale des Hopitaux of Paris (*Gaz. Hebd. de Med. et de Chir.*) the wax moulds of new syphilitic lesions observed in a monkey upon whom he had inoculated three infecting chancres eleven months before. The monkey, in whom the chancres appeared the 28th day after inoculation, and who presented consecutively papulo-erosive and diphtheroid syphilides of the penis; inguinal, axillary and sub-maxillary adenitis, as well as a marked emaciation; all of which have now disappeared with several plaques of alopecia on the head and back, has been attacked on the tenth month with an ulcerating lesion of the palatine mucous membrane. This ulceration ran a regular course of development and repair, and was finally replaced by a simple patch, paler and yellower than the surrounding mucous membrane. The evolution of syphilis, then, in the monkey, continues normally, in the same limits as in the man, and toward the tenth month exhibits an ulcerating syphilide. M. Martineau intends to continue his researches; he possesses a couple of monkeys of the same species, upon whom he intends to experiment with direct inoculation and the transmission through copulation; he hopes to obtain a reproduction of these animals, and so to study hereditary syphilis.

Removal of a Large Cystin Calculus by Supra-Pubic Lithotomy.—John Tremeane, M.R.C.S. Eng., reports this case in the *Australian Medical Journal*. The calculus was 2½ inches long 1¾ inches broad, 1 inch thick, circumference 7 inches and weight 2½ oz. 54 grs. (1.254 grs.), composed of pure cystin.

Retention of Placenta After Delivery in a Uterine Pocket.—Prof. Herrgote (Memoires de la Sociétiè de Medicine de France) relates a case, with admirable illustrations, of what he calls *enchatonnement* of the placenta. It is not easy to translate this phrase satisfactorily, but it signifies a condition of things which would resemble closely what we know as the hour-glass contraction of the uterus, were it not that there is an independent pouch projecting from the walls of the uterine fundus which encloses the placenta. The case, so far as the phenomena of labor and delivery of the child is concerned, appears to have been normal. The history of the case showed that bad treatment during pregnancy had been sustained, such as kicks upon the belly and three falls upon the back upon the staircase; but this treatment did not seem to be followed by any ill effects. The placenta not coming away in due time after delivery of a child by vertex presentation, abdominal palpation found the uterus two finger breadths above the umbilicus, hard and markedly bi-lobed. The principal lobe was the highest and to the right. Attempts were made to remove the placenta by introducing the hand into the uterus, and it was found to correspond in situation with the upper abdominal tumor—the cord attached and passing through a narrow orifice, which only admitted two fingers. The cord was detached from the placenta by the traction made upon it, and the constriction would not yield to any efforts at dilatation. No further efforts at removal were made, and the patient died of purulent peritonitis at the end of the fifth day.

The post-mortem showed a uterus having a long axis, directed superiorly to the right, measuring 0 m .17. The entrance of the right fallopian tube was seen to be on a level with the constriction, which led into a lobe measuring 0 m .07 in diameter, and 0 m .07 in height. The origin of the left fallopian tube was 0 m .03 below the seat of constriction. The uterine walls were firm throughout, being of the thickness of 0 m .015 in the body of the uterus and of 0 m .003 in the punch or lobe which contained the placenta.

This examination showed that the condition was not due to a vice of conformation, to a duplicity, complete or incomplete, of the uterus; that it was not produced by a spasmodic contraction of the womb, but that it rather resulted from the non-contraction of that portion of the uterus upon which the placenta was attached, and which was afflicted with inertia, while the remaining portion of the uterus contracted, thus being passively distended over its contents and thinned in its walls, becoming a true hernial pouch on the uterine surface, the constriction to which became more and more pronounced as the body of the uterus diminished in size.

MEDICINE.

Influence of Morphinism on Pregnancy.—In the Société de Biologie, of Paris (Comptes Rendus), M. Ch. Féré gave his observations in a young woman of twenty-two years, who was hysterical and the daughter of a hysterical mother, who was addicted to morphinism. She had been using morphine freely for three years, at first for facial neuralgia, when she became pregnant. It being deemed advisable to diminish the dose, she was taken with intense uterine colics.

At the time the dose was diminished she was taking 24 centigrammes of chlorhydrate of morphia per day hypodermically, and was six months advanced in pregnancy. At the time of her confinement she was taking only 16 centigrammes. M. Tarnier attended her through a normal labor. A progressive diminution of the dose of morphine was continued, but at each effort at reduction the uterine colics were reproduced, and the uterine contractions checked the discharge of the lochia, causing a complication which required much care in the degree of diminution.

With the child there were also curious phenomena noted. During pregnancy the active movements of the child seemed to resent the absence of the morphia. After birth the child remained sixty hours without sleeping. There was evidently in this a relation between the absence of morphia in the mother and the insomnia in the child.

General Paralysis after Diphtheria.—The *Australian Medical Journal* gives two cases of this rare sequel to diphtheria. The first is a case reported by W. Snowball, M.B., in a female child of four years of age. Four weeks previous to her being first seen by the doctor, she had what her medical attendant called an attack of "ulcerated sore throat," which lasted about 7 days, and her present symptoms dated from that period. The throat gave evidences of its previous ulcerated condition in enlarged tonsils and a scar on one side. There was no paralysis of the palate muscles, and she swallowed well, was healthy looking, and well nourished. Two weeks later she had lost all power in her legs from below the knees, patellar reflex absent. Four days later in addition, paralysis of the right arm and fore arm; ptosis of right eyelid. The next day the intercostal and pectoral muscles became affected, and the child died of apnœa.

The second case is reported by Dr. James Jamieson in a young man twenty years of age, who, when in the country, had a very mild attack of diphtheria; the disease in the house was very severe among the children, one of them dying of it. The throat affection was very slight after recovery, nor was there any loss of strength or of sensation of any part of the body. After a few days, however, of an unusual amount of walking, he complained of a weakness of the legs, and on examination exhibited distinct signs of paresis of the legs with numbness of the feet, specially felt on standing, and absence of patellar reflex. He had none the less, good power of resistance against efforts to flex or extend the legs. He became steadily worse, the paralytic symptoms extending to the arms, but

no eye or throat symptoms ever manifesting themselves. By treatment with massage mainly, in a couple of months he was well on to recovery.

NEW INVENTIONS.

THE GASTROSCOPE.—Mr. J. Leiter, of Vienna, has constructed a singular modification of the microscope, to which the name of gastroscope has been given. Its use is for exploring the interior of the stomach. It consists of a metal tube, 65 c.m. long and 15 m. m. thick, bent at an angle of 150° at about one-fourth of its length from the lower end. At the lower extremity is contained an incandescent electric lamp for illumination of the interior of the stomach, and an objective, at the back of which is a prism to reflect the pencil along the length of the tube; at the bend it is again reflected by another prism to the eye-piece. Provision is made for a circulation of cold water to prevent the lower end of the tube becoming inconveniently hot.—*Medical Press.*

CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING DECEMBER 1, 1883.

Medical Inspector D. Kindleberger, to be relieved from duty on the retiring Board on the 9th of December.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 23, 1883, TO NOVEMBER 30, 1883.

Wolverton, William D., Major and Surgeon: assigned to duty as post surgeon at Washington Barracks, D. C. (Par. 7, S. O. 222, Department of the East, November 27, 1883.)

Merrill, James C., Captain and Assistant Surgeon: relieved from duty in the Department of the East, and assigned to duty at Columbus Barracks, Ohio. (Par. 7, S. O. 270, A. G. O., November 24, 1883.)

Appel, A. H., First Lieutenant and Assistant Surgeon: relieved from duty at Fort Warren, Massachusetts, and assigned to duty at Madison Barracks, N. Y. (Par. 4. S. O. 217, Department of the East, November 21, 1883.)

Brewster, William B., First Lieutenant and Assistant Surgeon: extension of leave of absence granted September 15, 1883, further extended two months. (Par. 4, S. O., 271, A. G. O. November 26, 1883.)

Maddox, Thomas J. C., First Lieutenant and Assistant Surgeon: granted leave of absence for two months. (S. O. 136, Department of the Missouri, November 24, 1883.)

WE have reason to believe that a Medical Congress will be held at St. Petersburg next October, for the purpose of discussing all matters connected with cholera. M.M. Charcot and Pasteur, and other European authorities, are said to have promised to be present.—*British Medical Journal.*

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS.

SATURDAY, DECEMBER 8, 1883.

OHIO STATE SANITARY ASSOCIATION.—From a letter and circular published by R. Harvey Reed, M.D., Mansfield, Ohio, we learn that an active effort is being made in that State to organize a State Sanitary Association, to be composed not only of medical men, but of all citizens interested in the subject of sanitary science and the prevention of disease. That such an organization, meeting in general session once or twice a year, and more frequently in Sections in different parts of the State, could do very much to enlighten and direct public sentiment, not only in regard to the preventable causes of disease, but also in regard to the necessity for the enactment of wise and just laws for the promotion of the public health, there can be no doubt. The value of popular meetings for the consideration of topics pertaining to the sanitary interests of the people, when under judicious guidance, has been fully demonstrated by what has been accomplished in Michigan under the superintendence of her State and local Boards of Health. We trust the movement in Ohio may be successful in ultimately developing in that great and prosperous State a permanent and practically efficient health organization, one of the leading objects of which shall be to teach each individual citizen how to maintain a proper sanitary condition of his own premises.

THE PROPER MATERIAL FOR MEDICAL SOCIETIES.

BELTON, TEXAS, Nov. 13, 1883.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Dear Doctor:—We are on the threshold of organizing a local Medical Society, which is to be auxiliary to our State

Medical Association, and as the latter may be considered a "part and parcel" of the American Medical Association, we do not feel disposed or authorized to go into an organization with material at war with the *spirit*, if not the *letter* of the Code of Medical Ethics, as recognized by the National Society. *Therefore*, we most respectfully ask you if the following would be *suitable material* out of which to build up a local organization, viz.: (we will suppose a case) "Dr. Wm. Blank, Physician, Surgeon and Aurist, Chicago, Ill. Dr. Blank has made all diseases of the *ear* a study for several years, and has gone to considerable expense in preparing himself to treat scientifically the same. He gives, in addition, *special* attention to the therapeutics of female diseases. He makes no charge for writing prescriptions, if the party will have them compounded at the drug-store of his friend, John Smith & Co. If desired, the best of references given.

Now, Dr., we have given you a case. We are satisfied we are well acquainted with your individual or private opinion on this question, but we would be gratified and *profited* to have from *you* your views through the pages of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Being a member of the Association, and consequently a subscriber to the JOURNAL, we feel that we have a right to ask the counsel and advice of its editor on questions of such vital importance to the stability of our *parent* orgauization. Your answer to the foregoing question will have a salutary influence from one extremity of this great country to the other, as the same difficulties are constantly arising. Please let us hear from you. Very respectfully,

H C GHENT.

Although the questions raised by our correspondent in Texas have been substantially answered in the recent editorials on medical advertising and ethics, yet it will do no harm to devote a few words to the analysis of the supposed card of Dr. W. Blank, as given above. First, the use of the title, "Aurist," in addition to those of Physician and Surgeon, is expressly forbidden by the resolution adopted by the American Medical Association in 1869. Second, all that is said in regard to extra study and preparation for treating diseases of the ear "scientifically," and the giving, "in addition, *special* attention to the *therapeutics* of *female* diseases," is directly intended to invite the attention of persons affected with particular diseases, and is, consequently, in direct violation of a well known clause in the National Code of Ethics. Third, the promise to write prescriptions gratuitously, provided they are to be filled at a particular drug-store, would plainly indicate a corrupt and dishonorable collusion between the physician and druggist, which should render both unfit for membership in any respectable society.

Consequently, Dr. Blank could not be considered good material, or, in other words, a proper person for membership in a regular medical society. Neither could a society known to be composed of such members, be considered as eligible to representation in the American Medical Association.

THE INTERNATIONAL REVIEW OF MEDICAL AND SURGICAL TECHNICS.—This is the title to a proposed new periodical, to be published at 51 Union Park, Boston, Mass., and edited by Drs. Joseph R. Warren, Charles Everett Warren, and W. Everett Smith. Some idea of its scope and purposes may be gained from the following paragraph, taken from the announcement sent to us by the editors:

"This *Review* will be issued quarterly, upon the first of January, April, July, and October, and will be devoted chiefly to the description, illustration, and discussion of instruments, appliances and methods of operation that have been recently devised or published. The manufacture, use, care, and repair of instruments, as well as makeshifts and expedients in case of emergencies, or inability to procure the instrument desired, will receive especial consideration. Reports of the history, properties and medical use of drugs will not be published, being foreign to the purpose of the journal; but descriptions of new devices and methods for preparing and administering drugs will be noticed. Descriptions will in all cases be as concise as is consistent with clearness, and nothing that is of value to the profession, and is known to the editors, will be omitted. The original articles of contributors will be published in full whenever it is practicable so to do, and articles from foreign journals will be translated by a competent person and revised by the editor in charge, so that the *Review* will be international in fact as well as in name."

NEWS ITEMS.

MEDICAL TITLES.—Our provincial cousins "over the water" have shown a great deal of temerity lately in discussing the value, to the medical man, of the quality of the titles graciously bestowed by Her Majesty; and her Irish subjects have been indignant that they did not receive proper consideration in the distribution of such marks of honor. The latest comes from the *Australian Medical Journal*, which criticises the advertisement of a medical gentleman who styles himself "late assistant to the surgeon to the Queen." This is probably not a title conferred by official act, signed and sealed with due ceremony. Nevertheless, it has in part a familiar sound, and the *Journal* supposes that what is intended to be conveyed to the simple minds of the uninitiated general public is that the gentleman who thus describes himself was in the habit of running over to Windsor Castle, or up to Balmoral, when the Queen was a little out of sorts, and his principal was too busy or otherwise unable to attend in person. In our own country, the late lamented J. Marion Sims might with truthfulness have written "medical consultant to the crowned heads of Europe," but we never heard that he did it, or anything approaching to it. How would it sound for Bliss to say, "Surgeon in charge to his lately deceased Excellency, the President of the United States." Would he say also, "by permission." Let us not go too fast, however, in this criticism. The older members of the medical corps of the U. S. Army and Navy seem to have always been satisfied with the title of Doctor, but the younger men must

now be called Lieutenant and Captain, and the Majors and Colonels are not totally exempt. If the proposed bill to Congress from the Pharmaceutical Association is adopted we shall have to be careful to call the naval apothecaries Ensigns in the future.

THE PROPOSED FRENCH MEDICAL REGISTER OF THE WORLD.—In the project for the construction of a medical library in Paris (*Union Médicale*), it is proposed to make a special register for the insertion of the names of all medical practitioners legally pursuing their profession throughout the principal countries of the world. It appears that the number of medical practitioners, spread over all parts of the globe, amount to 193,000, viz: United States 65,000; France 26,000; Germany and Austria 32,000; Great Britain and her colonies 35,000; Italy 10,000; Spain 5,000.

SOCIETY PROCEEDINGS.

MINUTES OF SECTION SEVEN, ON DENTAL AND ORAL SURGERY, MEETING OF AMERICAN MEDICAL ASSOCIATION IN CLEVELAND, JUNE, 1883.

The Section was called to order by the Chairman, Dr. Goodwillie, of New York, and the Secretary, Dr. Brophy, occupied his position.

Dr. Williams, of Boston, moved that a committee of three be appointed by the chair to whom all papers be referred before being delivered to the Permanent Secretary of the Association. Carried. The committee appointed were Drs. Williams, Marshall, and Brophy.

REPORTS OF COMMITTEES.

The report of the Committee on the appointment of dental surgeons in the army and navy was deferred until the ensuing session.

The Committee on food and its relations to the various tissues of the body were granted further time to report.

Dr. John S. Marshall, of Chicago, read a paper on "Denudation or Erosion of the Teeth."

At the conclusion of the reading of Dr. Marshall's paper, Drs. Hayden and De Nickel, of New York, stated that Dr. Goodwillie had not properly registered, and was not therefore qualified to preside at the meeting. They further stated that Dr. Goodwillie had subscribed to the New York State Medical Society's Code of Ethics, in consequence of which a protest had been entered against his registering in this association.

Dr. Goodwillie stated that he had registered, protesting himself against signing a pledge (which all members were required to sign) to abide by and support the Code of Ethics of the American Medical Association. He had been informed before leaving home that there would be no objection to his presiding over the Section.

A point of order was raised—namely, that the communication of Drs. Hayden and De Nickel was non-official and consequently could not be received. The communication was subsequently made official by Dr. X. C. Scott, Chairman of the Committee of Arrangements, who also informed the Section that Dr. Goodwillie's case had been referred to the Judicial Council.

Pending the action of the Judicial Council on the case, Dr. J. L. Williams, who had occupied the chair while Drs. Hayden and DeNickel were making their statement, was elected temporary Chairman.

The paper of Dr. Marshall was then discussed.

Dr. Shattuck reported a case of canine cyst in antrum which he successfully removed.

Dr. W. W. Allport read a paper reporting a case of "Amaurosis Dependent on Dental Irritation."

At the conclusion of the discussion of the paper the Section adjourned.

Section called to order by the Chairman, Dr. Williams.

In the absence of the authors of papers at the opening of the session Dr. Marshall reported a case of pyorrhœa alveolaris occurring in the practice of Dr. W. W. Allport.

Dr. Talbot reported a case of septicæmia resulting from alveolar abscesses.

At the conclusion of the discussion of these cases the Section adjourned.

THIRD DAY—JUNE 7.

Dr. Williams resigned the chair and Dr. W. W. Allport, Chicago, was elected temporary chairman of the Section.

A paper on "Diseases of the Maxillary Sinus," by Dr. Geo. L. Parmele, Hartford, Conn., was read by the secretary.

Dr. Parmele's paper described the anatomical relations of the antrum of Highmore to the teeth, the nose, and the eye, directed attention to the consideration of the diseases of the teeth which affect it. Some of these are formidable, but most of those which come under the notice of the dentist are simple and easily cured, but if neglected or improperly treated they may assume so aggravated a form as to endanger the life of the patient, and we should so familiarize ourselves with the various manifestations as to be able to correctly diagnose and treat these cases. The principal diseases of this class are inflammatory distention of the antrum; dropsy or mucous engorgement; foreign bodies or wounds. The cause of inflammation of the living membrane, causing distention, can be ttaced in the majority of cases to a diseased condition of the superior molar and becupsids. Sometimes, also, it may be occasioned by the dentist facing irritating substances through the apical foramen in the treatment of devitalized pulps in teeth whose roots extend to the antrum. Blows upon the face or injuries in extraction may cause inflammation, or it may be an extension of catarrhal disease from the nasal cavity; or it may be set up by foreign bodies entering from without or from within the mouth. As a general rule, treatment is quite simple; over treatment in many cases retarding a cure. Often the mere extraction of a diseased tooth is all that is called for, generally the first molar, and if on doing this the antrum is not reached, the perforation of the cavity by means of the dental engine. Even in doubtful cases it is well to

perforate to ascertain what the contents may be. Some prefer perforating the alveolus above the gum; but the opening should be at the lowest point possible. Vent should be maintained till the mucous membrane has regained its normal condition, and the cavity should be carefully cleansed with injections of tepid water, to which is added some antiseptic. Often this is all that is necessary, but sometimes frequent injections of tepid water followed by stimulating injections must be employed. Among the causes of mucous engorgement of the antrum are diseased teeth, exposure to cold, blows, etc. The first aim in treatment is to evacuate the contents of the cavity and remove the cause. The opening should be maintained with plate and tube until by the use of stimulating and astringent injections, the parts have regained their normal condition, when the opening may be allowed to heal. In case of wounds of the antrum the bleeding is always slight. The treatment is simply to remove any foreign body which may be present, and keep the parts clean and free from inflammation. In endeavoring to extract foreign bodies from the antrum, it should be remembered that the cavity is occasionally divided by partial septa of bone projecting from its walls, forming pockets from which the body can only be removed by introducing curved scooping instruments. This condition would also naturally interfere with thoroughly cleansing the cavity by injections.

Dr. Allport related the case of a gentleman whom he met some months since, the side of whose face was badly swollen. Two or three surgeons, who examined the growth with the microscope, pronounced it cancer. The gentleman was shortly afterwards in Cincinnati, and called on an old dentist in Covington, who examined his mouth and found the floor of the antrum entirely removed, and with a bistoury made a free incision. The fetor was very strong and soon filled the whole house. With a scoop-shaped instrument he began to haul out of the cavity a substance about as hard as hard cheese, something like little worms, and kept on until nearly a teacupful had been removed. It took nearly an hour. At the end of two weeks the gentleman returned to Chicago. There were little reddish-blue patches on the inside of the antrum. The dentist who made the operation thought that he had demonstrated that there was no cancer, but Dr. Allport had since been informed that cancer had appeared in the antrum.

Dr. L. Buffet, Cleveland: The case just reported is right in the line on which the work of this Section ought to go. The trouble in the antrum had its origin in a local trouble, and was non-malignant at first. Undoubtedly it arose from the teeth, the watery portion of the infiltration into the antrum passing off, and the solid mass growing until the floor was entirely absorbed. The presence of the decomposing mass may have been the means of lowering the physical condition so as to permit the development of the cancer, if it was not inherited. If children are begotten by him after this they will have the cancerous diathesis, and by them it will be passed on to the generations. Cancer can be developed, if the cancerous diathesis is present, the same as scrofula can, by poor living.

Dr. Shattuck recently had an interesting case of disease of the antrum. The patient's physician had been treating him for neuralgia; there was some enlargement of the cheek, and he found the left superior cuspid absent and the second molar badly decayed. He came to the conclusion that there was something wrong with the antrum. He extracted the decayed tooth, the extraction being followed by a free flow of pus. There was no trouble in passing the probe through the opening into the antrum, where it struck something hard, which proved to be the missing canine. On being removed, its end was found to be necrosed, and it was somewhat honeycombed. The cavity was injected with warm water and the parts readily healed.

The subject was passed.

Section adjourned *sine die*.

BOOK REVIEWS.

LECTURES ON ORTHOPŒDIC SURGERY AND DISEASES OF THE JOINTS.—Delivered at Bellevue Hospital Medical College, during the Winter Session of 1874–1875. By Lewis A. Sayre, M.D., Professor of Orthopœdic Surgery and Clinical Surgery in the Bellevue Hospital Medical College, etc., etc., etc., etc. Second Edition: Revised and Greatly Enlarged, with 324 Illustrations. New York: D. Appleton & Co., 1883.

It is seven years since the first edition of this work was issued from the press, and became familiar to a large part of the profession. In preparing this second edition for the press, the author has carefully revised and rearranged the entire work, rendering it more systematic and complete. The chapters on spondylitis and lateral curvature have been entirely rewritten. This thorough revision has not only rendered the present edition more methodical in the arrangement of topics and more full in their consideration, but it has corrected some errors in dates that had been found in the first. Many pages of new matter and fifty-two new and excellent illustrations have been added to the present volume. The work embraces thirty-two lectures, originally delivered in the amphitheater of the Bellevue Hospital Medical College, in which are discussed and illustrated the following topics: History of Orthopedy; Deformities; Malformations; Talipes; Diseases of the Joints; Diseases Which Simulate Diseases of the Joints; Anchylosis; Diseases and Deformities of the Spine; Deformities Resulting from Paralysis; and miscellaneous topics, as Corns, Bunions, Ingrowing Toe-Nails, Hallus Valgus, and Displacement of Tendons. The second topic occupies four lectures; the third, one; the fourth, five; the fifth, twelve; the sixth, two; the seventh, two; the eighth, two; the ninth, two; the tenth, one. From the general topics named, and the number of lectures given on each, the reader will see that they embrace the whole field of orthopœdic surgery; and in no one volume will he find a more thoroughly practical discussion of each topic, or plainer and safer rules for his guidance in practice. If the zeal of the author sometimes gives

to a lecture a controversial tone, it only serves to enliven the reader and increase the activity of his thoughts. Like all who become leaders in any department of human life, instead of followers, the author's inventions and novel methods for the treatment of many important diseases and deformities, have made him, at different times, the subject of severe criticism. But his genius, sustained by a boldness and industry possessed by only a few, has enabled him to overcome all obstacles, and to have accomplished more than any other one man in placing the department of orthopœdic surgery in the prominent position which it now occupies before the profession.

The present volume is fully illustrated throughout, not only by a large number of excellent cuts and photo-electrotype engravings, but by numerous, well-selected cases, embracing almost every variety of orthopœdic disease and deformity. It is consequently well adapted for the use of both students and practitioners. The volume is a full-sized octavo, containing 569 pages, executed in the usual good style of the well-known pnblishers; and its contents will remain a monument to the genius, industry and zeal of the author, more durable than shafts of marble or pillars of granite

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REPORTS FROM THE CONSULS OF THE UNITED STATES ON THE COMMERCE, MANUFACTURES, ETC., OF THEIR CONSULAR DISTRICTS. No. 32. August, 1883. Published by the Department of State, According to Act of Congress.

There is generally something of professional interest to be found in these reports, and in the present number there is a report by Consul Tanner, of Liege and Verviers, on American Proprietary Medicines in Belgium, the tone of which is not very pleasing to the American medical practitioner. Consul Tanner is evidently doing all he can, and with self-commendation for his efforts, to introduce patent medicines abroad. He incloses an advertisement (not given) in the form of an American flag, 3½ by 6½ inches, with the reading matter (in French) on the white stripes, extolling Hop Bitters, which he says is distributed throughout the city and handed to every passer-by. He says: "Since my dispatch No. 27 I am glad to see other familiar medicines in the windows here, among them Allen's Hair Vigor. An idea pervades people that things that are foreign possess superior virtues to those found at home, and this is as much the case in Belgium as in the United States; therefore the foreign name is a recommendation. Dispatch No. 27, in addition to the letters written to this consulate, occasioned a visit from Mr. Charles Delacre, a well known pharmacist of Brussels, who deals extensively in patent medicines, both American and English. He had a plan to mention by which American medicines might be introduced, which I asked him to write out for me, and I would submit to the Department, which I herewith enclose." Consul Tanner goes on to recommend Mr. Delacre to the American dealer, and Mr. Delacre's letter is a purely practical one as to the best and most thorough means of advertising what he recognizes in so many words as the two classes of proprietary medicines. The first, such as may address the medical body, viz.: Lactopeptine, Maltine, Dr. Fellows' Hypophosphites, etc.; and the second, such as may address the public, as Hop Bitters, Mother Siegel's Syrup, Perry Davis' Pain Killer, Holman's Pad, etc.

The report of Consul Stahel, of Osaka and Hiogo, Japan, on the Tea Trade of Japan, is full of interesting matter concerning the widespread and injurious adulteration of tea.

Consul Welsh, of Florence, refers to olive oil, pure and adulterated. "The adulteration of olive oil in Italy has long been known to exist, and cotton oil has been so freely imported from the United States for that purpose that the Government has largely increased the duties thereon, the law of May 30, 1878, having fixed a duty of 6 livre per quintal, and the law of April 7, 1881, having established a duty of 20 livre per quintal." Prof. Commendatore Bechi, Director of the Technical Institute and of the Agrarian School, has the following test: 1 grain of crystallized nitrate of silver dissolved in 100 cubic centimeters of alcohol 98°; and it is applied as follows: In a glass bulb place 5 cubic centimeters of the olive oil to be tested; add to this 25 cubic centimeters of alcohol 98°, then add 5 cubic centimeters of the test. Place the whole in a water bath, temp. 151° F. After half an hour's immersion the oil, if injured, becomes of a dark, muddy color, and with practice and caution the actual proportion of the adulterating liquid can be determined. This test is based on the essential quality possessed by the glyceride of the cotton oil to reduce the nitrate of silver.

Consul Roosevelt, of Bordeaux, presents a report on the adulteration of wines in France, consisting in part of extracts from the French journals discussing the subject, which gives it a certain interest to medical men. The other reports in the volume serve as interesting reading on general topics.

MINUTES OF THE STATE MEDICAL SOCIETY OF ARKANSAS AT ITS EIGHTH ANNUAL SESSION. Little Rock. 1883. 8vo., 115 pp.

This is a well-printed volume, containing material which is confined for the most part to discussions on medical legislation and medical education, and to reviews of the progress of medicine. Such papers on cases and personal experience as were read during the session, are referred to by title only. The Board of Visitors to the Medical Department Arkansas Industrial University report favorably on the thoroughness of instruction imparted and the standard of examination. The number of matriculates for the session of 1882–83 was thirty-two, of which number four were candidates for graduation. Dr. Z. Orto, as Chairman. presented an interesting report on State Medicine; 208 names are borne on the list of members.

FIFTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF KENTUCKY, 1883.

Those who have watched the progress of State medicine during the past year have doubtless noted the difficulties under which the State Board of Health

of Kentucky has labored. Of the six members of the Board (all physicians) two have habitually absented themselves from all meetings of the Board, and withheld their aid in all its undertakings. The cause of this seems to lie in simple lack of interest, rather than any disaffection on the part of the non-conforming members.

In the selection of its secretaries, the Board has been, to say the least, unfortunate. When first organized (in 1878) a secretary was elected under circumstances which necessitated his retirement in order to avoid the odium of public scandal and criticism. He was succeeded by another physician, who, after three years' tenure of the office, was requested to resign. In consequence of a lack of harmony between the Board and its secretary, and an apathy in the discharge of the executive duties of that office, the affairs of the Board have gone on badly. At the last session of the General Assembly of Kentucky, a bill to double the very small annual appropriation of the Board ($2,500) failed of passage. When, soon afterward, the medical and secular press began to direct public attention to the scanty work accomplished by the Board, this organization was seriously embarrassed. The secretary made no response. The annual report for 1882 was meager, and, in many parts, full of errors. At this time the really efficient and able members determined to actively take the affairs of the Board into their own hands, and make its work scientifically valuable and practically useful. A committee was appointed to enquire into the adulteration of foods and medicines, and emyloy expert services in its investigations. The subject of school buildings and their proper ventilation was referred to another member, with instructions to appoint a sanitary inspector to inspect and report upon the sanitary condition of the public school buildings and asylums of the State. It was decided to elect Dr. J. N. McCormack, of Bowling Green, an accomplished and thoroughly practical physician, secretary, which was formally done at the recent quarterly meeting of the Board. With these auspices of new activities in anticipation, the fifth annual report comes to our table.

The volume opens with a list of the County Boards appointed by, and in connection with, the State Board. The act of the legislature establishing a State Board of Health, together with the amendments to that act which have been adopted, are given in full. The Secretary's report contains a number of letters from physicians in various parts of the State, relative to the health of their respective communities. The report also includes editorial articles relating to prevailing diseases and sanitary precautions from several newspapers, and a communication from the Secretary, Dr. J. J. Speed, to the daily *Courier-Journal*. It is difficult to comprehend the purpose of inserting these articles, containing interviews with physicians, and other clap-trap usually found in such communications, in the official report. Dr. J. W. Holland, a member of the Board, contributes an article on "Mortuary Statistics," in which he points out the defects in the method of collecting these data, and the injustice done the Board in holding it responsible for evidence gathered by county assessors. Dr. Holland, as a special committee on the "Adulteration of Food and Medicines," being unversed in practical chemical analysis, secured the aid of Dr. J. B. Marvin, of Louisville, a skilled practical chemist and microscopist, to examine and report upon the comparative value of the several malt preparations offered the profession. Prof. Marvin is well known as a pains-taking and trustworthy investigator in every detail of chemical analysis, and hence the value of his report upon this important class of constructive medicines. The preparations of malt, both plain and in combination with other medicinal agents, have, in consequence of their digestive and constructive properties, deservedly won a high place among therapeutic agents. It is well known that the digestive agent in these preparations is diastase, the principle which converts starch into glucose, and hence the merits of any given malt extract depend upon the activity of these diastatic properties. Prof. Marvin obtained, from a well known wholesale house, bottles of each of the following brands: Trommer's, Maltine, Keasbey & Mattison's, John Hoff's (imported), John Hoff's (Tarrant's), Liebig's, and Shaker's Aromatic Elixir. After applying the test most carefully under identical conditions, he places the Trommer extract at the head of the list, having found it to possess most active diastatic properties. Keasby & Mattison's preparation, he says, behaved in a similar manner, and these two preparations alone were found to possess the power of digesting starch. Maltine failed to respond to the test, and at the end of several hours gave no evidence of the desired qualities. The other preparations, also—Hoff's, Liebig's, Horlick Dry Malt Extract, and Shaker's—utterly failed to digest starch. Prof. Marvin concludes by stating that "to prescribe malt extract at its present price, and obtain a sample which contains no diastase, is to pay very dearly for malt sugar and extractives from barley." The expert services of Prof. Marvin were also secured for a report upon "Illuminating Oils." The results of testing five samples of oil in common use for illuminating purposes are given, together with the restrictions which should be made upon the sale of these dangerous agents. This is one of the most valuable features of the report.

Prof. C. Lewis Diehl, of Louisville, the well-known chemist and pharmacist, in conjunction with Prof. Holland, made an analysis of six popular brands of sulphate of quinine, the results of which are accurately reported. Our limited space prevents a synopsis of this important investigation.

Dr. R. W. Dunlop, of Danville, a member of the Board, contributes a brief article on School Sanitation, in which he points out the dangers of propagating contagious diseases when a large number of children are gathered together from day to day. He also directs attention to the importance of observing the well-known principles of light and ventilation for the health and development of the inmates of school-rooms. He concludes with a plea for good light, pure air, short school hours, no crowding, and mild discipline. This is an excellent and thoroughly prac-

tical paper. For inspection of the public school buildings and asylums of the State, Dr. Dunlop secured the services of a sanitary inspector, Prof. L. Eddy, of Danville, whose scientific attainments and mature experience furnish special qualifications for the task assumed. An examination of Prof. Eddy's report shows a thorough comprehension of the principles involved in heating, draining, ventilating and furnishing water to large public buildings, and also gives evidence of a conscientious accuracy in all the work undertaken. This paper represents a great deal of labor, including personal inspection of the insane hospitals, the schools for the feeble-minded and deaf-mutes, and the public school buildings in all the principal towns of the State. The report concludes with an admirable paper npon the principles of ventilation, particularly as applied to school buildings.

Dr. J. N. McCormack, of Bowling Green, a member of the Board, relates how an epidemic of small-pox was controlled in Edmonson county, and contributes a paper entitled, "A Sanitary Survey of Bowling Green." This paper is quite sufficient to fix Dr. McCormack's reputation as a sanitarian. While of local interest for the most part, it illustrates in an admirable manner the principles of sanitation as applied to towns. The paper is a model of its kind. It is replete with information, and shows throughout an abundance of practical knowledge. It is illustrated with an instructive map, showing the geological formation, elevation above the river, and the points of prevalence of epidemic diseases. Dr. McCormack's paper gives the result of chemical and microscopical analysis of the water supply, with suggestions relative to the important matter of sewerage. We cannot but repeat this sentence: "In such matters as the sewerage and water supply of a town, the authorities are the most convenient agents of the individuals, but on most points sanitation, like religion, is a personal matter, and each individual, or each household, has a work to do which cannot be done by others."

Dr. Pinckney Thompson, of Henderson, the President of the Board, contributes to this volume a readable paper on "The Causes of Typhoid Fever." Dr. Thompson is a practitioner of ripe experience, and has written this paper after a thoughtful observation of the disease, and an investigation of recent writers upon the subject. He denies the specificity of enteric fever, and endeavors to prove that the decomposition of animal and vegetable matters generates a poison capable of producing typhoid fever. Dr. Thompson thinks that if the now accepted views of the pathogenesis of typhoid are correct—that each case results from the poison of a previous case of the disease—it would be a *scandalum magnatum* upon the profession if the disease were not quickly exterminated. It is quite evident that Dr. Thompson's enthusiasm upon the vital principle of cleanliness as a sanitary measure, has overcome his impartial consideration of evidence in this intricate pathological inquiry. With increasing experience in the investigation of the origin of epidemics of typhoid, outbreaks which cannot be traced to the introduction of the specific poison become more rare, and fewer observers are found to support the views of Murchison, as adopted in Dr. Thompson's paper. There is overwhelming evidence that the poison is always and invariably derived from some previous case, and the only facts which *appear* to indicate its independent origin, are occasional outbreaks of the fever in villages or isolated districts, which cannot be traced. On similar grounds the *de novo* origin of small-pox and all the well known specific contagions could be proved.

In addition to the papers above noticed, the volume contains articles from Dr. Arch. Dixon, of Henderson, on the "Duty of Physicians to the State Board of Health"; and by Dr. W. M. Fuqua, of Hopkinsville, on "Small-Pox." Both of these contributions are interesting.

This volume contains an article by Dr. J. G. Carpenter, of Stanford, with this very pretentious title: "A Report of the Diseases of Stanford and Vicinity, their Causation and Mortality, and of the Local Board of Health of Lincoln County." In a space of less than five pages this portentous subject is disposed of. It would be difficult to find in an equal space a more conspicuous exhibition of inaccuracy of pathological knowledge in general and as applied to vital statistics, together with a more total disregard for grammatical language. The extraordinary statement is made that "muco-purulent ophthalmia, epidemic and contagious," ranked third in degree of prevalence in a community situated in a fine temperate climate, and engaged for the most part in agricultural pursuits. The expressions, "malarial typho," and "infantal diarrhea," and the statement that "diphtheria was sporadic," will convey an idea of the reckless manner in which words are coined and applied by this writer. The writer does not give the source or method from which his data were obtained, but deals with the extent and character of prevailing diseases in a large county during an entire year in the most dogmatic and self-assured manner. The paper is utterly worthless, and one is at a loss to understand how it was admitted to a volume containing so many valuable articles. Indeed one must suppose, from a perusal of this paper, that the Board has as yet put no restriction upon the character and extent of voluntary communications.

We hope this Board will be strengthened by judicious appointments on the part of the Governor of Kentucky, during the approaching session of the General Assembly; and that having passed the ordeal of five years' experience, it will enter upon a career of renewed usefulness to the public, creditable alike to itself and the cause of State medicine in America.

DOMESTIC CORRESPONDENCE.

WASHINGTON LETTER.

The medical schools of Washington are now in full operation for the winter, with fair classes. Clinics are given at the Providence Hospital, Children's Hospital, and Central Dispensary.

Prof. J. Ford Thompson has returned from Europe, where he spent considerable time in following the

practice of the Germans, and has resumed charge of the Chair of Surgery in the National Medical College (Medical Department Columbian University), and gives regular clinics at the Children's Hospital.

Surgeon-General J. B. Hamilton, United States Marine Hospital Service, has been appointed to the Chair of Surgery in the Medical Department of the Georgetown University, and gives clinics at the Providence Hospital. Prof. Hamilton lectured on Surgery at the National Medical College during the winter of 1882–83, during the absence of Prof. J. Ford Thompson, and now takes the place of Dr. Beale, who has resigned.

Dr. Frank Baker, formerly Assistant Demonstrator and Prosector of Anatomy to the National Medical College, now fills the Chair of Professor of Anatomy in the Georgetown University Medical Department.

The Societies began their regular meetings with October. The Medical Society of the District of Columbia meets weekly.

On September 26th Dr. W. H. Taylor read the notes on *A Case of Opium Poisoning Treated Successfully by Atropia and Caffein Hypodermically and Artificial Respiration.*

The subject was a woman of 45 years of age, who took a half ounce of laudanum at 3 P. M. She was first seen at 5 P. M., when she was insensible; pupils contracted to a pin's point; conjunctivæ not responding to irritation; pulse rapid and small. Administration of zinc sulphate and application of cold water had no effect. At 5:40 P. M. respiration 6 per minute, pulse 118. Atropia sulphate $\frac{1}{160}$ grain hypodermically. At 5:50 atropia sulphate $\frac{1}{53}$ grain; respiration 2; pulse 136. At 5:54 atropia sulphate $\frac{1}{53}$ grain; respiration ceased for over a minute; pulse could not be counted, action of heart very rapid. Applications of cold water and artificial respiration. In a few seconds respiration recommenced. Caffein one grain hypodermically. At 6, respiration 8; pulse 120. At 6:10, caffein one grain; respiration 12; pulse 128. At 6:23, atropia sulphate $\frac{1}{53}$ grain; respiration 9; pulse 128; swallows and sensible to outward impressions; pupils begin to dilate. At 6:40, caffein ½ grain; respiration 7, pulse 126. At 7, natural sleep.

In the discussion which followed Dr. Reyburn said he had succeeded with nitrite of amyl in a child three months old, which had become thoroughly narcotized.

On Oct. 17, Dr. Joseph Taber Johnson presented the ovaries and fallopian tubes which he had removed from a young lady seven days before. The patient was 21 years of age, and had presented for several years the characteristic symptoms of chronic ovaritis. After nine years of painful menstruation, and four years of unsuccessful treatment, the operation was performed, and the patient is now doing very well, having a pulse of 88. and a temperature of $100\frac{4}{10}$. In a case operated on a year ago last August by him, both ovaries and one tube were removed, but the patient had menstruated with the greatest regularity ever since the third month after the operation. In accordance with the theory of Lawson Tait, he had removed as much of both tubes as he could, in the hope of establishing a permanent change of life.

Oct. 31, Dr. S. O. Richey read a paper on Ametropia.

Nov. 7, resolutions were passed and remarks made upon the recent death of Dr. W. G. H. Newman, viz:

WHEREAS, The Medical Society of the District of Columbia has heard with deep regret of the death of Dr. W. G. H. Newman, one of its oldest and most esteemed members:

Resolved, That by the death of Dr. Newman, the profession has lost one of its most earnest and efficient practitioners, and the community one of its most respected and valuable citizens.

Resolved, That the zeal and devotion with which he discharged his professional duties, without regard to the wealth or position of his patients, are deserving of the highest praise and commendation.

Resolved. That the members of this Society tender their heartfelt sympathy to his family in their sad bereavement, and that they will attend his funeral in a body.

Dr. D. R. Hagner spoke of the traits of character of Dr. Newman, as a true and loyal friend, and as a constant and laborious worker among the poor without the slightest hope or thought of pecuniary reward. Born in Maryland, in 1827, he was a student under Dr. Nathan R. Smith, of Baltimore, and a medical graduate of the University of Maryland in 1849. A practitioner of medicine in the District of Columbia for thirty-four years, he held several offices of trust—Physician to the Poor; Member of the City Council; of a former Board of Health; President of the Board of Visitors to the Washington Asylum; for twenty-one years consecutively Surgeon of the Police, and for fifteen years Chief Physician to St. Anne's Infant Asylum. Latterly, he has been one of the consulting staff of Providence Hospital. He died of malignant disease of the pylorus, but retained his hold upon his active practice and the affections of his patients to almost the last moment. Dr. Hagner feelingly described the father and husband taking him up in their arms to the bedside of their suffering loved ones.

Other remarks were made by Drs. Johnson Eliot, Louis Mackall and D. J. Kelly, which confirmed and enlarged upon Dr. Hagner's high estimate of Dr. Newman as a man and physician.

LETTER FROM WASHINGTON.

The annual report of Columbia Hospital for Women, and Lying-in Asylum has been submitted to the commissioners of the District of Columbia by the Surgeon in charge, Dr. P. J. Murphy. The report of the President, Mr. William Paret, refers to the evidences of good management and skillful treatment presented by the absolute freedom from deaths in the many cases of child-birth, and the minutely small proportion of deaths from other causes.

Dr. Murphy's report states that four deaths only are recorded as occurring in the medical and surgical wards, and in the lying-in wards no maternal death is recorded. There were one hundred and thirteen children delivered, which, with the one hun-

dred and fifty-six of last year, makes a total of two hundred and sixty-nine deliveries (instrumental, preternatural and natural) without a single maternal death. There has been no case of puerperal fever in two years, and no case of gathered breast in the last one hundred and thirteen deliveries. The infantile mortality reached only three as against four for the preceding years.

The report of Columbia Hospital dispensary for the fiscal year shows a total of five hundred and ninety-eight treated during the year, and forty-seven under treatment at present. Prescriptions compounded, one thousand five hundred and two.

The report of the Treasurer, J. T. Mitchell, shows that the amount of appropriation from the general government was $15,000, and the amount received from pay patients $9,215.22, the average daily expenditures being $54.51½, and the average cost per diem for each patient $1.78. He mentions the completion of the west wing of the hospital building, for which Congress, in August, 1882, appropriated $10,000.

The weekly meeting of the Medical Society of the District of Columbia was held on Nov. 14th. Dr. W. W. Johnston presented an interesting specimen of myoma of the uterus, and read the history of the case. Dr. H. R. Bigelow read an exhaustive paper on Points in Connection with the Pathology, Ætiology and Diagnosis of Myo-Fibromata of the Uterus. In the discussion which followed, Dr. Reyburn stated that from the statistics gathered by the chief physician of the Freedmen's Bureau, between one-fifth and one-fourth of the cadavers of colored females beyond the age of thirty years, were found to contain uterine tumors.

J. MARION SIMS, M. D.

DR. N. S. DAVIS, EDITOR JOURNAL AMERICAN MEDICAL ASSOCIATION:

At the annual meeting of the Æsculapian Society of the Wabash Valley, held at Paris, Ill., Nov. 21-22, the society having under consideration the death of Dr. J. Marion Sims, of New York, Dr. John Morgan McKown, of Arcola, Ill., offered the following tribute to the memory of the distinguished surgeon, which, by vote of the society, was ordered published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

C. B. JOHNSON,

CHAMPAIGN, Nov. 30, 1883. *Sec. Æsculap. Soc.*

Death, which respects neither attainments, nor rank, nor usefulness, nor genius even, has laid his pallid hand on one of the gifted ones of earth, and we mourn with dimmed eyes and troubled hearts a great man fallen. J. Marion Sims is dead! That active intellect, acute, grasping, alert, commanding, will never be felt again among the thinkers of earth, except in the priceless legacy of its great achievements. Wherever civilization has come; wherever genius is loved; wherever the beneficent offices of the healing art have blessed the homes and sweetened the lives of men; wherever the dignity and the grace and the sweetness of woman have had their charm for the heart and the life of the race—there will the death of J. Marion Sims bring the tribute of a sigh or a tear. Full of years, full of usefulness, full of honors, he has lain down to needed rest.

Whatever distinction other sons of New York may have gained in the stern struggle of life, in all the elements of a man, J. Marion Sims stands the peer of any who ever trod her soil. Versatile, magnetic, brilliant, with a voice whose every cadence was a charm, he moved among men a rare and gracious presence, and to woman was a perpetual wonder and benediction. Rescuing her, by his industry, his love, his ceaseless devotion to the high demands of his art, and by his genius, from the awful catastrophe of a blighted life and a miserable death, is it strange that she should go to his tomb with something of the sorrow and adoring love with which Mary went to the sepulcher of the Nazarene?

But why multiply words? No voice from this society can call back the radiant spirit of our dear, dead friend, or add to his essential glory. His life lives green in the memory of his professional brethren, and with them he needs no eulogy. Whatever carping criticism, whatever asperity, whatever unkindly feeling there may have been, in any quarter, while this strong and daring personality was doing its ceaseless work, "the grave buries every resentment." To us, now that the clods of earth cover his bosom, and we have his memory only, he stands the embodiment of skill and devotion and genius. And to the world he will always stand, in some sense,—in a large sense, indeed,—as the representative of what is highest and best and truest and sweetest in our calling.

"His life was gentle, and the elements so mixed in him, that nature might stand up and say to all the world, *this was a man!*"

THE PULSE AFTER HANGING.

MARYVILLE, TENN., Nov. 28, 1883.

PROF. N. S. DAVIS, M.D., EDITOR:

On the 23d inst., Andy Taylor was executed or hanged at Loudon, Loudon County, Tenn. Being one of the physicians appointed to be present at the execution, I took the following notes: Pulse after the rope was adjusted, 121; first minute after the drop, pulse 54; second minute, 52; third minute, 39; fourth minute, 20; fifth minute, 0; sixth minute, 70; seventh minute, 73; eighth minute, 0; ninth 34. After this no pulse was perceptible; neck not dislocated; died from strangulation. The heart beat the nineteenth minute one time, and two or three times only from the ninth to the nineteenth, when life was extinct. No priapism produced. Drop fell at 3:15 P. M.; the body was cut down in thirty minutes. I send you the above items, thinking that they would be of some interest to the profession from a physiological standpoint. I am, very respectfully,

JOHN P. BLANKENSHIP, M.D.

NECROLOGY.

SIMS, JAMES MARION, M.D., of New York, was born in Lancaster District, South Carolina, January 25, 1813; died suddenly of heart disease at his residence in New York, November 13, 1883. He was a descendant of the great Scottish chieftain Rob Roy McGregor. His birth place was in the vicinity of the dividing line between North and South Carolina, near where General Jackson first breathed life. Having received a good education at the common schools, by the aid of private tutors he also became well grounded in the classics and studied French, which he wrote and spoke with readiness. At a proper age he entered and graduated in letters from the South Carolina College in 1832. His medical studies were pursued in Charleston, S. C., and then in Philadelphia, Pa., where he received the degree of M.D. from Jefferson Medical College in 1835. The following year he began practice near Montgomery, Ala., and the following year moved to the city, where he acquired a large and lucrative business. In 1845 he communicated to the profession some new views on "Erismus nascentum," which he published in the *Amerieaan Journal of Medical Sciences* 1846 and 1848. In 1845 his attention was especially called to the gravity and frequency of vesico-vaginal fistula, which, previous to that time, had been deemed incurable. He conceived the idea of relieving it by a surgical operation. To this end Dr. Sims established at Montgomery a private hospital in which he received patients suffering from this accident and after many efforts and modified procedure, instruments, and operations in 1849 fully established the fact to the profession that his operation was a success. The devotion and earnestness with which he pursued this branch of surgery led by nec-es sity to invent a number of new instruments and devices to accomplish the desired results, some of which bear his name. Among which are the specculum, the use of the silver wire sutures which would become saculated, instead of the silken thread, was of itself a great factor in the success. Subsequently he used this silver wire suture in all operations in which the suture was required. His health failed in 1850 and in 1851 while confined to his bed by a severe and protracted indisposition, which he and his friends feared would terminate in death he wrote his famous paper, "Sims' Operation for Vesico-Vaginal Fistula," which was published in January, 1852, in the *American Journal of Medical Sciences*. The good results which he obtained in his hospital for the special treatment of diseases and accidents peculiar to women, reports of which were published in the *Medical Journal*, speedily awakened among medical men much interest, and patients were sent to consult Dr. Sims from all parts of the country.

A change of climate on account of his health as well as to find a larger field for professional work, led him to settle in the city of New York, in 1853. Although his health was not fully restored, yet with the encouragement of some of the leading physicians, within a year he commenced the founding of a Womens' Hospital in that city, which, through his energy, efficiency, eminent surgical skill, and under the patronage of some forty of the first ladies of New York, soon became an established fact. To bring the subject directly before the profession of the city of New York he delivered a convincing address upon the needs of such a hospital to a large audience in the old Stuyvesant Institute. A committee of physicians were at once appointed to assist in accomplishing the object. An appropriation of $25,000 was obtained, which, with the funds raised by the ladies, a house was rented for temporary use on Madison avenue, and the hospital opened in May, 1855. Dr. Sims was elected attending surgeon, and Drs. Alcott, Stevens, Francis, Delafield and Green a consulting board. The institution was immediately filled with patients from all parts of the country. The success attending the treatment of patients, and the important operations performed in it speedily demonstrated its usefulness and the need for an enlarged establishment.

During the session of the New York Legislature in 1857 and 1858, Dr. Sims obtained a charter for the "Woman's Hospital for the State of New York," and obtained from the city 80,000 feet of ground for hospital purposes near Central Park, opposite Columbia College, and an appropriation of $10,000 to assist in its construction. Dr. Sims made a careful study of the merits of different kinds of hospitals and plans, and finally adopted the pavilion system as the most satisfactory and best suited to his purposes. The first pavilion containing 70 beds was completed and occupied in 1866. Largely through Dr. Sims and the merits of the hospital State aid at different times, to the amount of $60,000 was obtained for the institution. A second pavilion was opened in 1876, and the combined capacity of the pavilions was 260 beds. This hospital is at once a monument to Dr. J. Marion Sims, and to humanity and medical progress of the age. In 1861 he (Dr. Sims) visited Europe, chiefly to study hospital construction and their sanitary requirements. His coming was everywhere heralded, and he received from the profession in all the larger cities and hospitals such a welcome as has rarely or never been given to a medical man. He was solicited to operate in many of the leading hospitals, and by surgeons who themselves enjoyed a world-wide reputation. London, Paris, Dublin and Brussels were each in turn the the theater of his surgical triumph, and which renewed reputation in many and different hospitals. His successes were so noted and brilliant that he speedily received decorations from the Government of France, Italy, Spain, Portugal and Belgium as a public benefactor. From France he received the "Order of the Knight of the Legion of Honor," and from the Belgian "The Order of Leopold."

In 1862, after a brief stay at home, he returned to Europe to place his children at school, but with the intention of returning to his practice in New York, which had grown to be large, responsible and remunerative. But as soon as it was known that Doctor Sims was in Paris patients flocked to him in such numbers, from all over the world, as to fully occupy his time, which rendered it next to impossible for him to elude promise of treatment and relief. It

was not till 1868 that he again returned to New York and resumed his practice, his family remaining in London. In 1870 he was in Paris at the opening of the Franco-Prussian war and was the means of organizing what is known in history as the "Anglo-American Ambulance Corps," and was made its surgeon-in-chief. The organization did good service at and after the battle of Sedan. He was placed in charge of a hospital with over 400 beds and served faithfully and effectively for a month, when he resigned the place. He was one of the escort which attended Marshal McMahon from the field when wounded by a shell. The incident was gracefully remembered and acknowledged by the Marshal giving them a thousand francs to purchase delicacies for those confined in the hospital. The account or report of the services of the operations of the Anglo-American Ambulance Corps was made by Dr. Sims' first assistant, Wm. McCormack, now Sir Wm. McCormack, and published, in London, in 1870. I am unable at this time to give a full list of Dr. Sims' contributions to medical literature. Whenever he wrote he had something to say which the medical profession was ready and anxious to hear. So able and original an exponent of the art and principles of medicine was sure of an answer. Besides the two papers which have been noticed and which brought him at once so prominently before the profession he wrote on "Silver Sutures," in surgery, "Clinical Notes in Uterine Surgery," "Intra-Uterine Fibroid Tumors," "Microscope in Sterile Condition," "A Treatise on Craniotomy," and a "History of the Discovery of Anæsthesia," and his "Centennial Address" as President before the American Medical Association in 1876. In addition to these he was a frequent contributor to the current medical journals. Dr. Sims was an active or corresponding member of many medical societies at home and in Europe, besides being an honorary member of numerous medical and scientific societies. He was a member of the Alabama State Medical Society, the New York State Medical Society and the New York Academy of Medicine, the New York Neurological and the New York Pathological and Surgical Societies. Honorary member of the Connecticut, Virginia, South Carolina and California Medical Societies. Dr. Sims became a member of the American Medical Association in 1858 as a delegate from the "Woman's Hospital of New York." He attended the meetings in 1860, 1872, 1874, 1875, 1876, 1877, and 1880, and was President in 1876. Dr. Sims has made some valuable communications to this Association, which may be found in its Transactions.

He was also a member and President of the American Gynæcological Society, and has contributed ably to its Transactions. His skill and eminence in the obstetrical art led to his engagement to attend the accouchements of the Empress Eugene, of France, and also the Empress of Austria. His practice in Europe was largely among the nobility, from whom he received large fees and valuable presents.

The doctor visited Washington City a few weeks ago and bought a most elegant site for a residence on Sixteenth street, and looked forward to a home in this city, where he should retire from active practice. He was then in apparently good health, and certainly looked remarkably well, but spoke of the necessity of his being careful as to diet and exposure. Wishing to avoid the rigor of the winters, he proposed to visit Italy, and had anticipated a delightful sojourn of two or three months in Rome.

Some three years since, Dr. Sims suffered from a severe attack of pneumonia, since which time he has found that he suffered in cold weather. Hence, for the past two years he has spent the winter months in the south of France and in Rome, and the rest of the year in other parts of Europe, France, and the United States.

Dr. Sims was united in marriage Dec. 21, 1836, to Eliza Theresa, daughter of Dr. Bartlett Jones, of Lancaster, S. C., who, with seven children, survives him. His son, Harry Marion Sims, is in active practice, and most abundantly and worthily inherits the ability and skill of his father, whose memory the whole medical profession loves to honor, for by his genius, and devotion to medical science and art he advanced it in its resources to relieve human suffering as much, if not more, than any man who has lived within this century. Doctor Sims's funeral takes place from Madison Square Presbyterian church on Friday—a church in which he was one of the oldest pew-holders.

Peace to his ashes.

J. M. T.

THE CHICAGO THROAT AND CHEST HOSPITAL—ITS ORGANIZATION.—A meeting was held yesterday at the residence of the Rev. Dr. Wm. M. Lawrence, to organize a Chicago Throat and Chest Hospital, and the following named gentlemen were chosen directors: The Hon. Wm. Aldrich, the Rev. Dr. Wm. M. Lawrence, Dr. E. Fletcher Ingals, Dr. G. F. Hawley, the Hon. C. C. Kohlsaat, W. Howard, and Hermon Kohlsaat. The object of the hospital, like its namesake of London, England, and others on the Continent, is to offer opportunities of treatment to those who are unable to employ a physician, but are still unwilling to be considered objects of charity. The hospital will consist of an out-door department where patients will be treated daily, and of an in-door department where patients will be cared for by experienced nurses under the direction of the attending physician. No physician is to accept a fee from any of the patients, or from the institution. We have already made ample provision for in-patients who are able to pay for board only. We hope to have the out-patient department in working order in about two weeks.

NOVEMBER 25, 1883.

A SANITARY CONVENTION will be held under the auspices of the State Board of Health, in the city of Ionia, Michigan, Thursday and Friday. December 13 and 14, 1883. Officers of the Convention: President, Rev. J. Pierson, D.D.; Secretary, Alex. W. Dodge, Ionia; Assistant-Secretary, Erwin F. Smith, Lansing. Reduced fares on railroads may be obtained by applying for certificates to the Secretary of the Convention.

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ORIGINAL ARTICLES.

THE CAUSES OF THE VARIATIONS OF THE CARDIO-AORTIC OR "PRESPHYGMIC" INTERVAL.

BY A. T. KEYT, M.D., CINCINNATI, O.

CHAPTER III.

One of the outcomes of the simultaneous graphic method has been the demonstration and measurement of an interval of time between the beginning of ventricular contraction or systole and opening of the aortic valves, or beginning of the aortic pulse. The term "presphygmic," applied to this interval by the author, appears well chosen, as expressing the phase of ventricular systole which precedes the rise of the arterial pulse. This term and "cardio-aortic" or "ventriculo-aortic," will be used synonymously in this article.

Observations relating to the presphygmic interval must necessarily be made on man between the point of ventricular beat and the point of pulsation of a near artery, as the carotid, or subclavian; the former being usually selected as more accessible for exploration. To get the presphygmic interval in its purity, it is only required to deduct from the full cardio-carotid interval the brief transmission interval of the pulse wave between the points named; but so short is this interval compared with the whole cardio-carotid time difference that practically it may be neglected, and the time between the ventricular beat and carotid pulse taken as the representative of the presphygmic interval.

Experiments on the schema in aid of elucidation of questions pertaining to the presphygmic interval must be made between a pump representing the heart and near point of a tube representing the aorta. Accordingly, for our purpose, the upper receiver was placed in communication with the interior of the pump of the schema, and the lower receiver with the interior of the egress tube, twelve inches distant. Thus, compression of the pump or ventricle immediately increases the pressure within, which increase sooner or later overcomes the valvular barrier, and is felt in the arterial tube. The two events of ventricular and arterial increase of pressure are instantly signaled as waves, and their time relation to each other is then easily determined. The arterial tube, being practically rigid, would give for the short distance traversed an inappreciable transmission interval, so all the delay signaled by the traces may be placed to the account of the schematic presphygmic interval. The action of the hand on the pump can be made to imitate very closely the movements of the human ventricle.

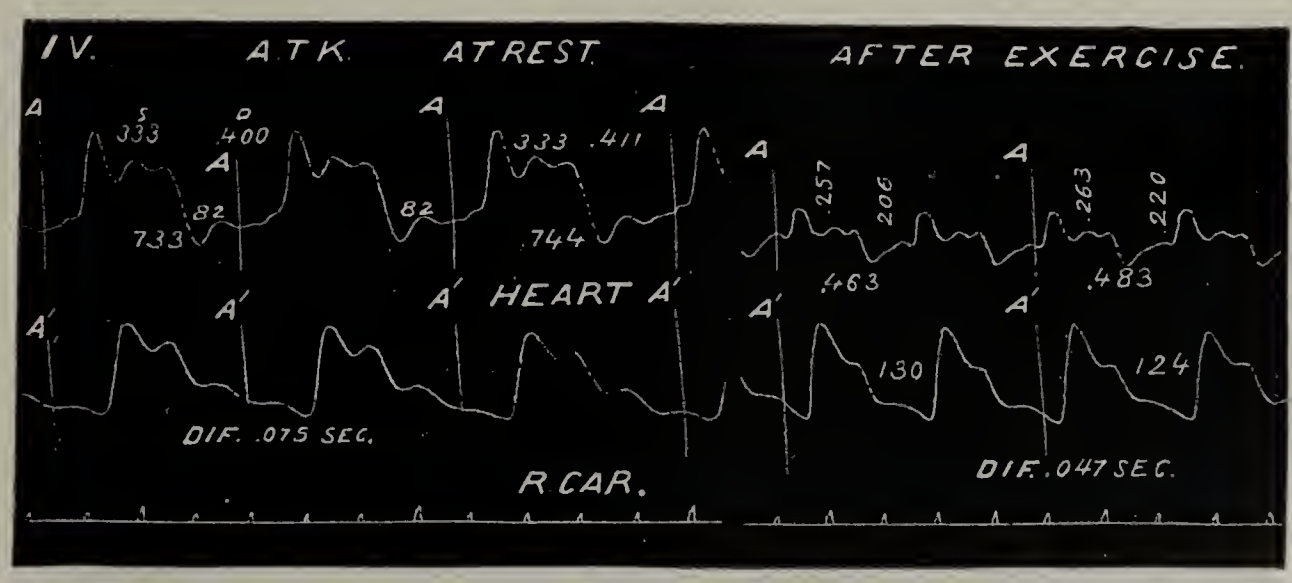


Fig. 43.

In the present study the form of distinct propositions will be continued.

PROPOSITION I.—The duration of the presphygmic interval varies with the pulse rate; being shorter with frequent and longer with rare pulsations.

Experiment on man never fails to prove variation in the sense stated, of the cardio-carotid interval coincident with a considerable variation of pulse rate. We offer two illustrations. Fig. 43 is reproduced from a former publication.[1] The heart and carotid were traced before, and immediately after, active exertion. The pulse rate before was 82, after 130. The cardio-carotid interval was before .075", after .047", all as shown

Fig. 44 was taken from a girl, aged twelve years,

[1] *Boston Med. and Surg. Journal*, Sept. 29, 1881, p. 293.

on the second day of scarlet fever. Temperature 103.2°, pulse-rate 126. The tracings are of the heart and radial, and carotid and radial. The cardio-radial interval measures $\frac{1}{10}''$ and the carotid-radial $\frac{1}{15}''$, which would make the cardio-carotid interval only $\frac{1}{30}''$. We could easily multiply such examples.

Coincidence of cardio-carotid lengthening and pulse infrequency has its limits. We have found that an interval of $\frac{1}{10}''$ usually goes with a pulse of 60, but

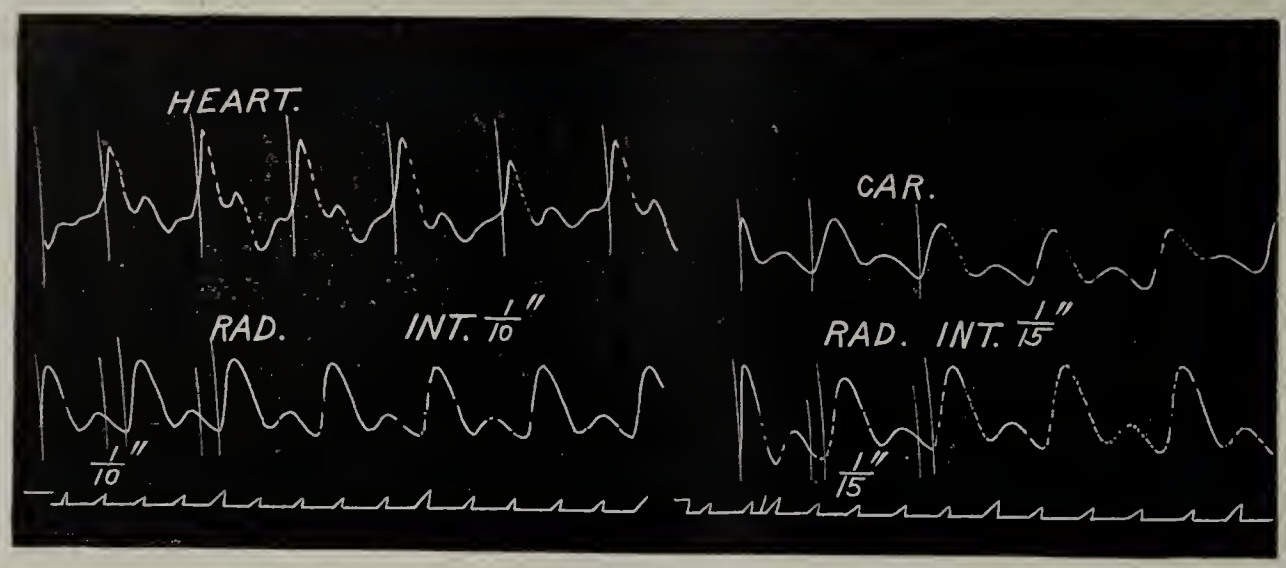


Fig. 44.

if the latter fall lower, there is no certainty that the former will farther lengthen.

This relationship between the pulse-rate and cardio-carotid interval for variations between 60 and 120, the author expresses by the following working formula: The cardio-carotid interval is normally about one-tenth the duration of the pertaining pulsation.[2] Thus a pulse of 60, 1 second long, would give for the interval $\frac{1}{10}$ second; a pulse of 72, $\frac{5}{6}$ second long, would give $\frac{1}{12}$ second, and so on. Any considerable departure from this ratio, we consider, would be irregular, and dependent upon abnormal conditions. New observations confirm in the main the justness of this formula.

Nevertheless pulse-rate in itself can have no modifying influence upon the presphygmic interval; other things being equal, the rate may be fast or slow and the interval remain the same. With the schema, the ventricle worked at a uniform quickness and force, and the outflow and pressure maintained at a given rate and value, the interval between the rises of pressure in the ventricle and artery will be the same, whatever the order of succession of the impulses.

But in the organism, when the pulse-rate changes other conditions change likewise, and in these concomitants we shall find the real producers of the presphygmic variations found associated with modifications of pulse-rate.

PROPOSITION II.—The duration of the presphygmic interval varies with the mode of ventricular systole; being longer with slow and shorter with quick contractions.

It would appear that effect must follow cause as implied in the proposition; for a quick action of the ventricle must raise the ventricular pressure, so as to overcome the arterial pressure and send forth the wave sooner than a slow action. But the demonstration is easily made on the schema.

In Fig. 45 the ventricle was first made to contract slowly, and then quickly, with a ventricular pressure of 4 inches, and arterial gradually rising from 50 inches. It is seen that the interval between the ven-

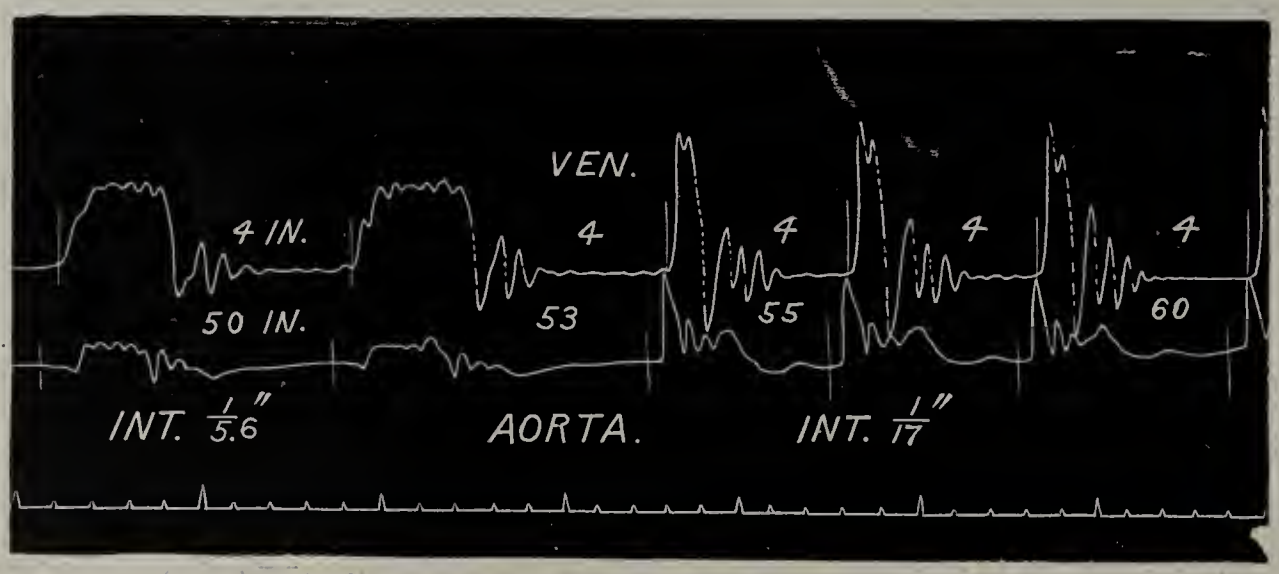


Fig. 45.

tricular and arterial waves is very much longer under the slow impulsion than that under the quick; the former measuring $\frac{1}{5.6}''$, and the latter $\frac{1}{17}''$.

It is plain that the greater the difference between the pressure in the ventricle and artery, the greater will be the modifying effect of different modes of ventricular action; and if the pressures are in equilibrium, a slow action will start the arterial wave as soon as a quick action.

When we seek in man examples of the effect of different modes of ventricular action, we find them in modifications of pulse frequency. The frequent

[2] *Boston Med. and Surg. Journal*, April 29, 1880, p. 409. Also, *Cincinnati Lancet and Clinic*, March 29, 1879, p. 224.

pulse is sent forth by a comparatively quick systole, and the rare pulse by a comparatively slow systole. Figures 43 and 44, lately produced, well illustrate this proposition. It cannot be doubted that a quick ventricular systole characterized the acceleration of movement shown.

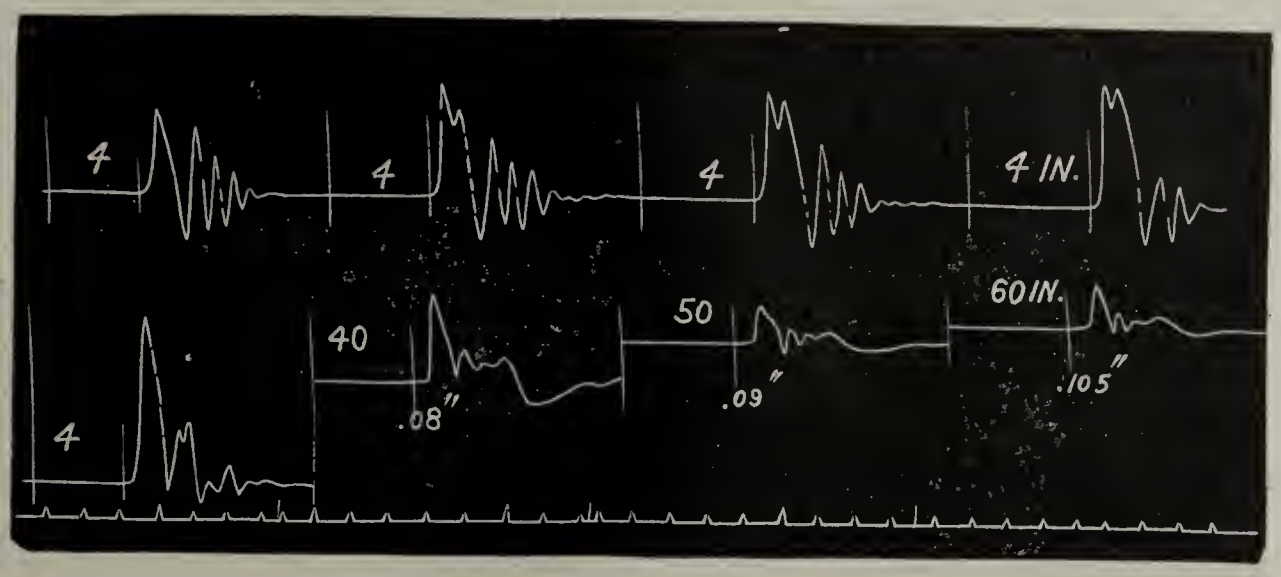


Fig. 46.

It may be true that the arterial pulse is sometimes quick and rare, or slow and frequent; but ventricular systole is probably always slow when rare, or quick when frequent. We can understand such coincidence of slow systole and quick pulse, or quick systole and slow pulse, inasmuch as the quality of the arterial pulse depends upon the arterial as well as the cardiac conditions.

PROPOSITION III.—The duration of the presphygmic interval varies with the excess of arterial over ventricular blood-pressure, and is longer with a high, and shorter with a low value of such difference.

Assent to this proposition is readily gained through *a priori* processes. At the beginning of systole, the higher the arterial pressure relatively to the ventricular, the longer must be the time required to raise the latter above the former. One condition alone could defeat such an order, viz.: a quicker initial ventricular contraction coincident with the higher arterial pressure; but the proofs are convincing that the reverse obtains.

In demonstration, we offer an example from experiments on the schema.

Fig. 46 shows traces of the ventricular and arterial waves at different degrees of arterial pressure, the ventricular remaining throughout at a uniform pressure of 4 inches. The first waves, with pressures in equilibrium, show no appreciable arterial delay; the second waves, with arterial pressure at 40 inches, show a delay of .08 second; the third waves, with arterial pressure at 50 inches, show a delay of .09 second; and the fourth waves, with arterial pressure at 60 inches, show a delay of .105 second.

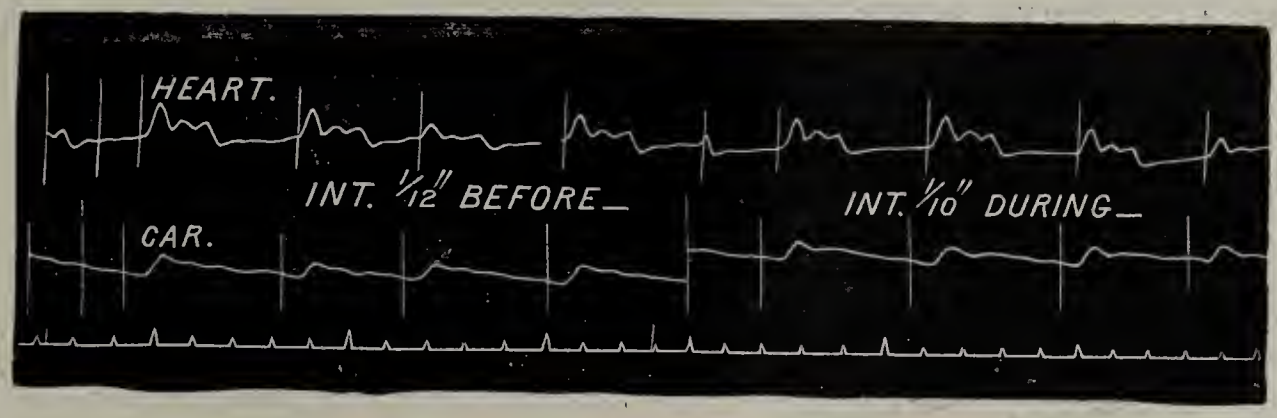


Fig. 47.

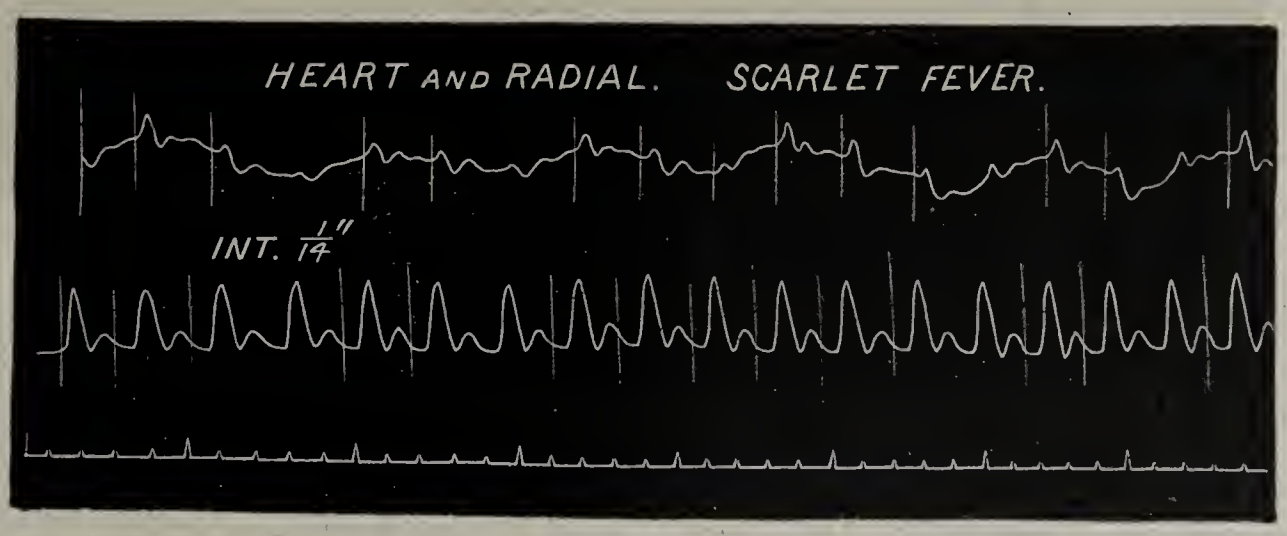


Fig 48.

In man the experiment of tracing the heart and carotid before and during compression of the femorals, succeeds in showing elongation of the presphygmic interval as a result of increased aortic pressure. Fig. 47 is an example taken from the nine year old

boy that furnished Fig. 27. The cardio-carotid interval is $^1/_{12}$ second before and $^1/_{10}$ second during the compression. This experiment commends itself for its purity in that there are no complicating conditions.

Again, in fever the arterial pressure is notably low, and always in this condition, if the heart valves are intact, the cardio-carotid interval is shown to be diminished. In illustration, besides Fig. 44, before given, Fig. 48 may also be studied. It was taken from a boy five years old in the height of scarlet fever, of which he died two days afterwards. The rate stands in a sense as the exponent of the mode of systole and relative arterial pressure. When the pulse is frequent, systole is quick and the pressure is low, and the interval is short. On the other hand, when the pulse is rare, systole is slow and the pressure is high, and the interval is long.

It is worthy of remark that the ventricular and arterial blood-pressures, while readily changing their relative value, tend promptly to return to the normal difference, and in the processes of these fluctuations the operations of the modifying factors may again be farther modified. Thus, if the capillaries become constricted, the increased arterial pressure will add itself to the slow ventricular contraction, and the two will produce a marked lengthening of the presphygmic interval, but soon the ventricular pressure rises and the arterial declines, the balance is restored, and the mode of systole and the presphygmic interval again become normal.

Or, again, if the capillaries become suddenly relaxed, the arterial pressure falls, the heart starts off with quickened and accelerated action, and the two factors here unite to produce a marked shortening of the presphygmic interval, but under the increased frequency of the systoles the pressure soon rises again, and whilst rising, the pulse acceleration not yet checked, the factors antagonize each other, and the presphygmic interval may not be diminished, though the pulse is frequent. Soon, however, all is regular again. These variations of conditions and effects can be well illustrated on the schema.

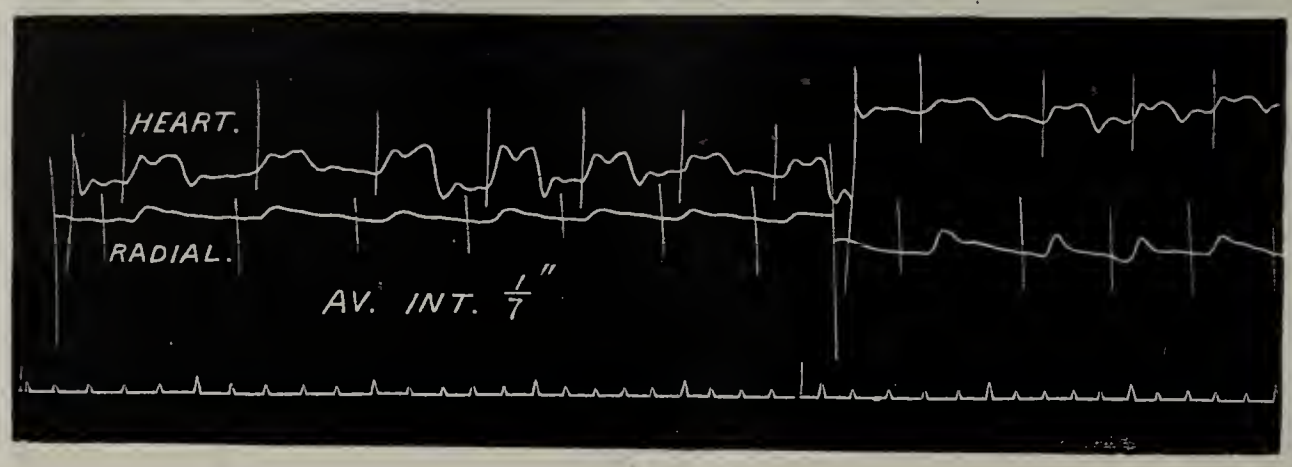


Fig. 49.

traces are of the heart and radial, but from these it is easy to approximate the interval between the heart and carotid.

The cardio-*radial* interval averages about $^1/_{14}$ second, which, even with a rapid transmission time would make the cardio-carotid interval extremely short; in no event could it exceed $^1/_{30}$ second. To make the showing stronger we introduce figure 49, taken from a healthy little boy of the same age, on the same day, with the instrument unchanged. It will be observed that the cardio-*radial* interval here averages about $^1/_7$ second, twice as long as in the former instance.

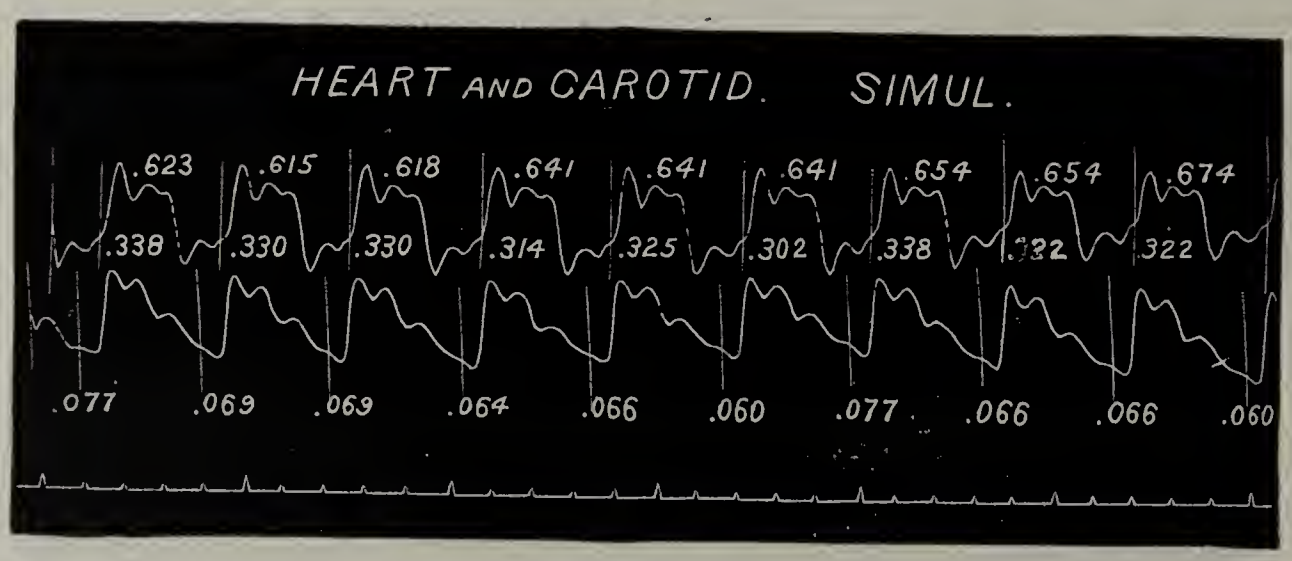


Fig. 50.

However, examples from fever cases are complicated with the effect of quickened systolic contraction; and indeed, it is difficult from any source to obtain the effect of lowered arterial pressure dissociated from that of systolic quickening. Nevertheless, it must be true that quickness of ventricular contraction could not produce such shortening of the presphygmic interval without concurrence of the effect of low arterial pressure.

We are now prepared to understand why the duration of the presphygmic interval is proportional inversely to the pulse rate. It is because the pulse-

Proposition IV.—The duration of the presphygmic interval is subject to limited variation, even when the cardiac action and blood-pressure appear most regular and equal.

In illustration of this proposition, we will study Fig. 50, selected for the distinct markings and appa-

rent regularity of the pulsations. We took the pains to measure on the slide the cardio-carotid interval of each pulsation, marking the result below each basal point of the carotid traces; also the duration of each cardiac systole and cycle, marking them respectively as shown in the cut. These measurements were made under a glass, with extreme care, and it is believed they contain no material error.

The lower row of decimals shows the variations of the cardio-carotid interval. The longest interval is .077" and the shortest .060".

The upper row of decimals shows the duration of the cardiac cycles. Examining the relation between these and the corresponding cardio-carotid intervals, the variations are found discrepant; a long interval going, as likely, with a short cycle, and a short interval with a long cycle. So in the small variations of cardiac rhythm, the rule does not hold of a ratio between the presphygmic interval and the pulse-rate.

The middle row of decimals shows the duration of the cardiac systoles. Examining the relation between these and the cardio-carotid intervals, the variations are found in the same direction; a long interval going with a long systole, and a short interval with a short systole. The correspondence here shown we have found to hold as a rule in the small variations of systolic duration of so-called regular pulsations. But the rule has exceptions, for the length of systole is determined by its ending as well as by its mode of beginning.

Therefore we feel justified in formulating these observations under the following statement:

PROPOSITION V.—In the small variations of apparently regular pulsations, the presphygmic interval does not observe any rule of variation with respect to the duration of the cardiac cycles, but as a rule varies in the same sense as the duration of the cardiac systoles.

In explanation of the proposition, we remark there are no facts anywhere to indicate that diastole is anything but a cipher in the processes; all depends upon systole. The explanation is found in the fact before developed and applied—viz.: that when the systoles are longer their beginning is slower, which determines a longer interval; and when the systoles are shorter their beginning is quicker, which determines a shorter interval.

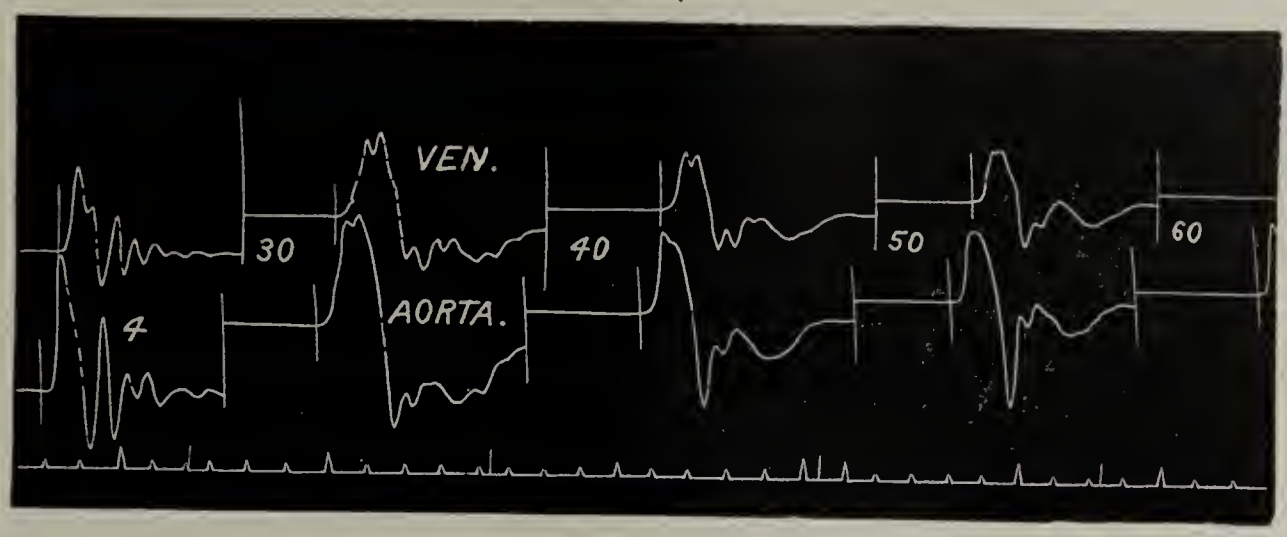


Fig 51.

Passing now to the consideration of cardiac valvular and orificial troubles, we commence with—

PROPOSITION VI.—The presphygmic interval is abnormally shortened in free aortic insufficiency.

François-Franck first demonstrated on man that the delay of the arterial pulse on the heart is diminished in aortic insufficiency. The author had independently foreseen the fact, and given its true rationale,* and soon was able to verify its reality by actual observation. The fact needs no further substantiation, and such precipitation of the arterial pulse, notably of the carotid, of course, implies abbreviation or extinction of the presphygmic interval. However, the phenomenon in question is so happily illustrated on the schema that we will not forbear the presentation of two examples of results so obtained.

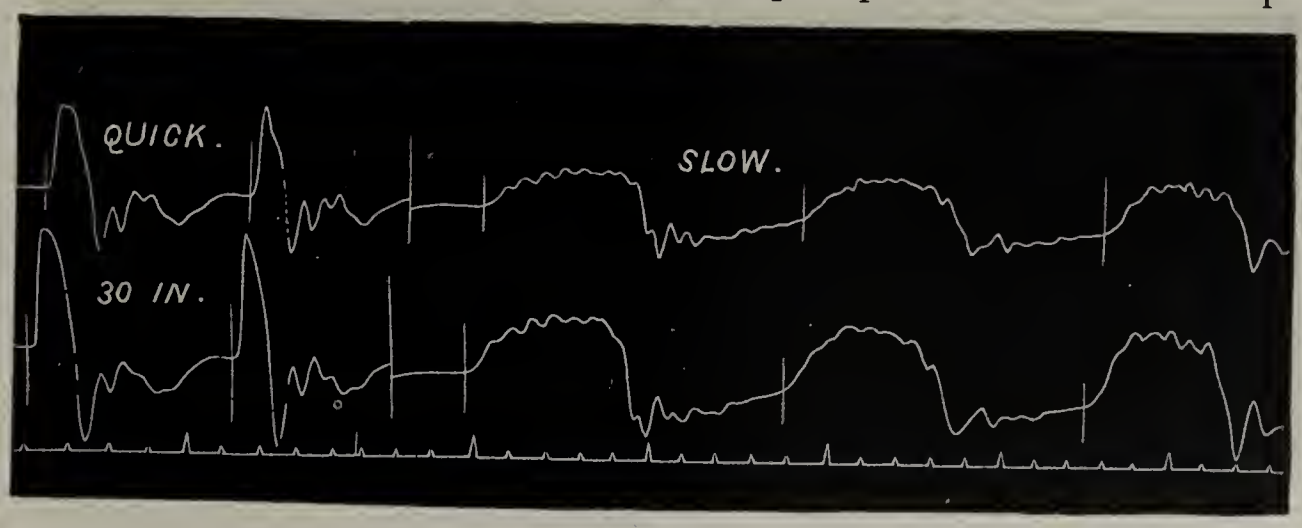


FIG. 52.

Fig. 51 shows traces of waves from the ventricle and aortic tube taken with the egress or aortic valve removed, representing free aortic insufficiency. The waves were traced at successively increasing pressures, viz.: 30, 40, 50 and 60 inches.

It is shown that the ventriculo-aortic time-difference is inappreciable throughout, the lowest and the high-

Cincinnati Lancet and Clinic, March 29, 1879, p. 224.

est pressure giving precisely the same result. It is also shown that the ventricular pressure rises *pari passu* with the arterial.

Fig. 52 represents aortic insufficiency under quick and slow action of the ventricle. It will be noticed that the waves are as nearly synchronous under the one as under the other.

These showings are all distinctly different from what has been shown to take place when the valves are intact; and in the light of their testimony we are all the more ready to accept the following explanation of the interesting and valuable diagnostic fact, that the arterial pulse appears distinctly earlier than normal in free aortic insufficiency:

When the aortic valves are permanently open, the blood-pressure at the end of diastole is equal in the ventricle and aorta, they constituting parts of one cavity, and therefore, immediately upon the contraction of the ventricle, the blood-pressure in the aorta begins to rise. Whereas when the aortic valves are intact, the blood-pressure at the end of diastole is much lower in the ventricle than in the aorta, and therefore time is required after the beginning of ventricular systole to raise the ventricular pressure above the aortic, which must take place before the arterial pulse can be initiated. In the one case the presphygmic interval is intangible, in the other it can easily be measured.

In contrast with the preceding is:

PROPOSITION VII.—The presphygmic interval is abnormally lengthened in mitral insufficiency.

We were the first to demonstrate abnormal delay of the arterial pulse in mitral insufficiency. Our published cases[1] show the cardio-carotid interval to be at least double what would otherwise be normal to the individuals. In illustration of this important fact we will here add one other example:

Fig. 53 was taken from the patient referred to in Chapter II, and from whom was taken Fig. 32, showing the carotid-radial traces. It will be remembered he was suffering from typhoid fever complicated with mitral regurgitation. The traces of the first of the figure were taken on the 19th day of the fever, with temperature 103.2°, and pulse-rate 114. The cardio-carotid interval measures between $\frac{1}{9}$ and $\frac{1}{10}$ second; when, under the conditions, without mitral insufficiency, it could not have measured half as much.

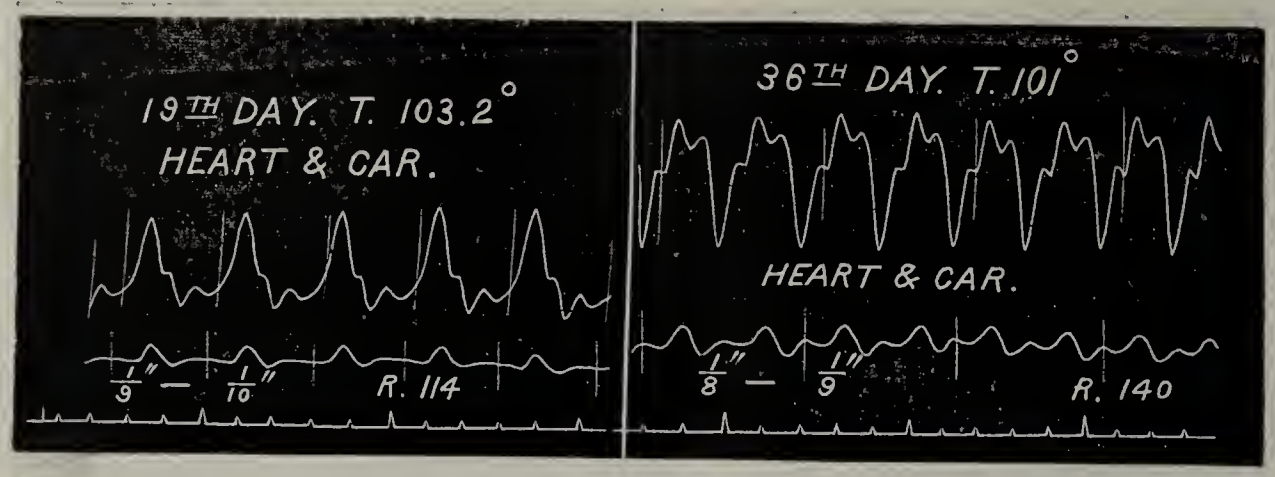


Fig. 53.

The last part of the figure was given on the 36th day; temperature 101°, pulse 140. The cardio-carotid interval here measures between $\frac{1}{8}$ and $\frac{1}{9}$ second, when, irrespective of the valvular lesion, it could not, in any event, have exceeded $\frac{1}{24}$ second. Contrast these intervals with those of the fewer cases Figs. 44 and 48, in which there was no cardiac valvular trouble, and in which the cardio-carotid intervals were not over $\frac{1}{30}$ second.

The schema also is lucid here. If the ingress or mitral valve be removed and a second pouch added to the ventricle, in imitation of the auricle, and then these worked in imitation of the action of the heart, and traces taken, we get a prolonged ventriculo-aortic time-difference. Fig. 54 gives results obtained under the conditions named.

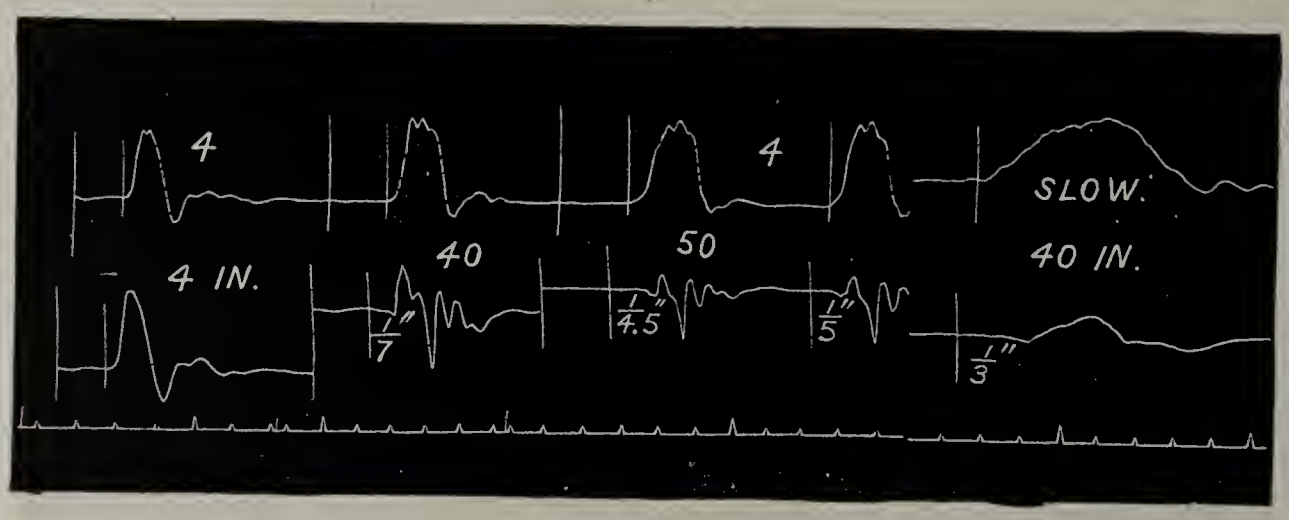


Fig. 54.

These intervals are very long, compared with those of Fig. 46, in which the valves were intact.

From the form of the ventricular traces it might be supposed that the action was slow, and the longer intervals resulted therefrom; but in fact the contractions were quick, and the sloping ascents were in consequence of the free backward escape of the liquid. The traces in the latter part of the figure show the increased lengthening effect of slow ventricular contraction.

[1] *Lancet and Clinic* (Cincinnati), March 22, 1879.

Then, with the proofs in its favor, we risk nothing in accepting abnormal delay of the arterial pulse, in other words, elongation of the presphygmic interval, as a certain effect of free mitral insufficiency. And the mechanism of the phenomenon we would explain thus: When ventricular systole begins, there being no mitral barrier, the blood first flows into the relaxed auricle, and is not turned into the aorta until a sufficient head of pressure shall have gathered to force the aortic valves. Time is thus lost between the beginning of ventricular contraction and that of aortic expansion, and the presphygmic interval is accordingly lengthened.

proved *post mortem*. The mechanism and result can be aptly shown on the schema.

Fig. 55 was procured with the egress valve pressed upon by a spring-weight, which permitted it to yield only to a superior pressure. It will be observed that the ventriculo-aortic intervals are very long, and even with the liquid pressures in equilibrium at 4 inches. In the figure, the effect of stenosis is added to that of the heavy valve, as shown in the sloping ascent and rounded and distant summit of the arterial trace. But it is possible to obtain on the schema what sometimes happens in the living, viz: retardation of the beginning without retardation of the summit, by having the valve close with a species of locking. so that its opening is delayed, but when once forced it rises up freely. Thus heavy aortic valves without stenosis cause delay of the beginning without delay of the summit of the arterial trace; while heavy valves with stenosis cause delay both of the beginning and

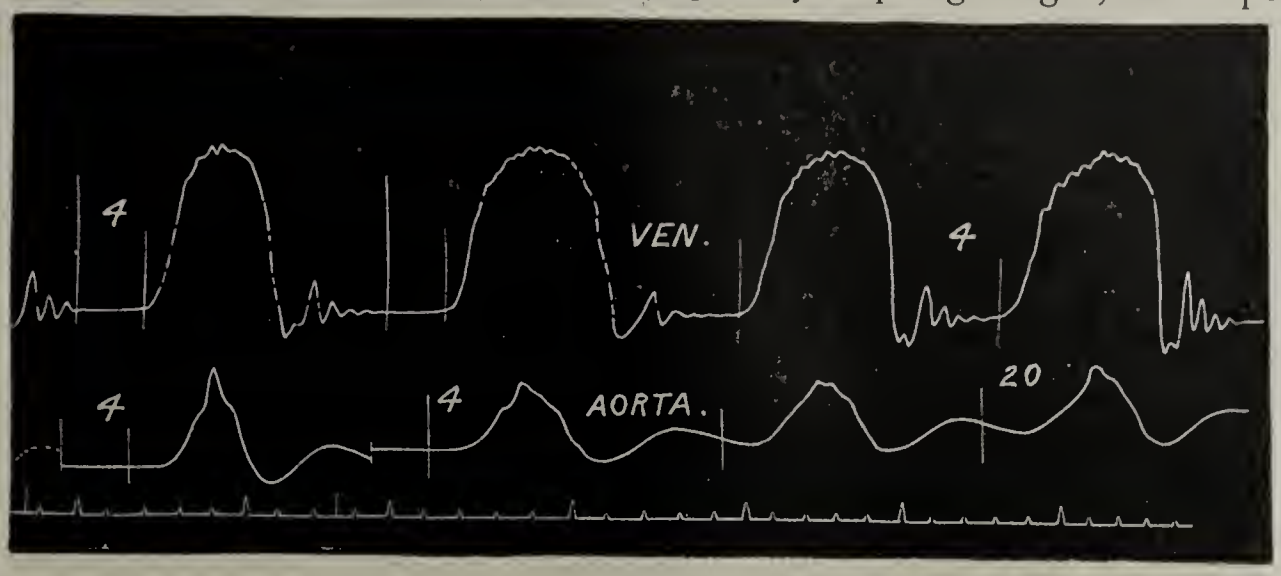


Fig. 55.

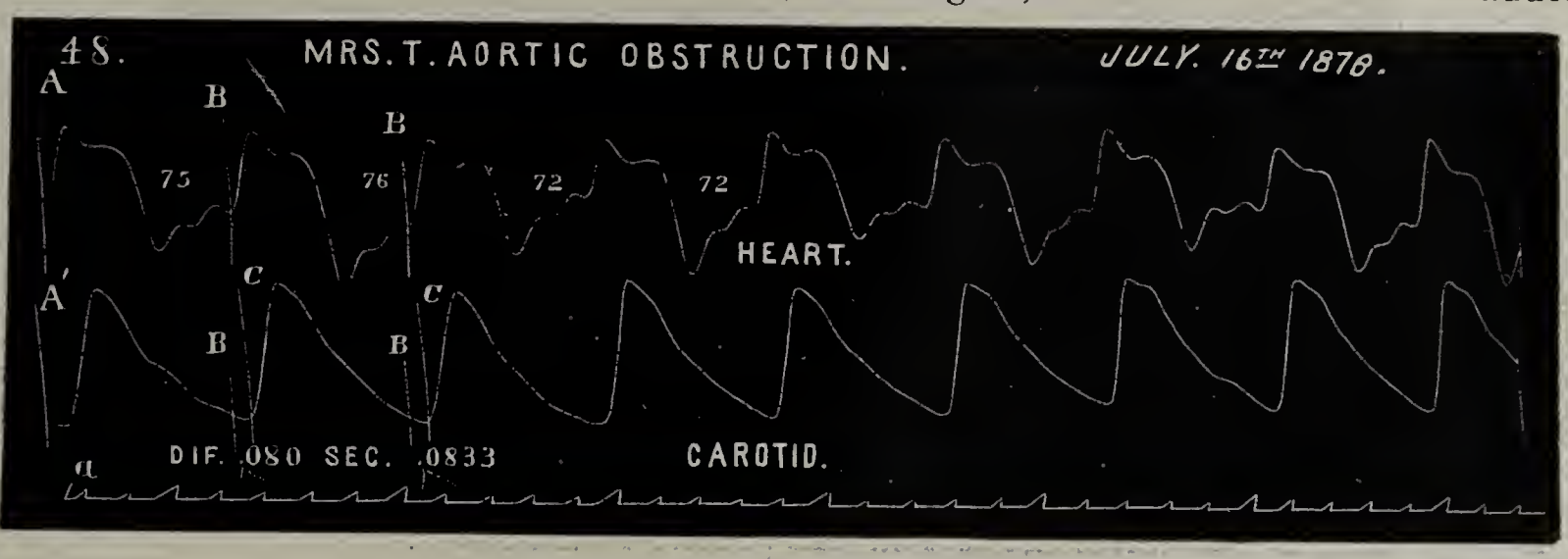


Fig 56. Effect of Aortic Stenosis.

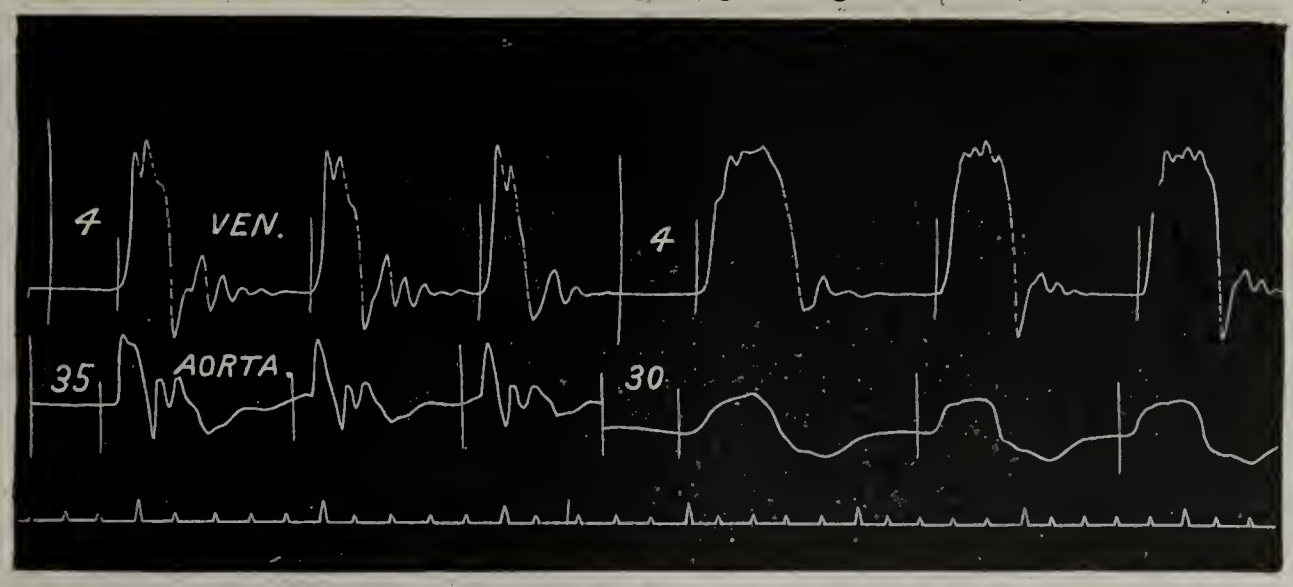


Fig. 57. Effect of Aortic Stenosis shown on the Schema.

PROPOSITION VIII.—The presphygmic interval is lengthened in that variety of aortic obstruction in which the elevation or opening of the valves proves to be difficult independent of the blood-pressure.

Examples have been elsewhere contributed of great delay of the carotid pulse arising from this cause, as

summit. Manifestly the presphygmic interval is only concerned in delay of the beginning of the arterial wave.

PROPOSITION IX.—Aortic obstruction from pure aortic stenosis does not cause elongation of the presphygmic interval, but only delay of the arterial summit.

It is plain that, with pliable aortic valves, the blood would begin to flow as soon through a small as through a large orifice.

The form of the pulse in aortic stenosis is familiar to all, but Fig. 56, here republished, shows not only the peculiar form, but that the beginning of the pulse was not delayed.

Schema: In Fig. 57 the traces of the first part were taken at thirty-five inches pressure, with the valve intact and tube free; and the traces of the last part at thirty inches pressure, with valve intact and tube constricted by compression just in front of the valve. It is seen that while the form of the arterial trace after the compression is strictly that of aortic stenosis, the beginning of the waves are not in the least later than before the compression.

Therefore the presphygmic interval is not lengthened in aortic stenosis if the aortic valves are pliable.

PROPOSITION X.—The effect of mitral constriction on the duration of the presphygmic interval remains as a problem to be solved.

No examples have been furnished from any observer of measurement of the cardio-arterial interval in cases of mitral stenosis. Experimental data in relation to this point are derived alone from the schema, and these, though positive, we hesitate to accept until confirmed by observations on man. However, the fact is patent that in no instance has the schema failed, when applied, of reproducing the same effects as observed in man.

Fig. 58 shows the result obtained, the first part under normal conditions, the last part with ingress tube constricted immediately behind the valve. The ventricular trace indicates that under the constriction the pressure within must have fallen in diastole to a point relatively low. But the striking showing is the great decay of the arterial trace, showing about ¼ second, whereas the normal shows about $\frac{1}{10}$ second.

This result was a surprise to us, and yet, on maturer reflection, it does not appear inconsistent with the mechanisms involved in mitral contraction. At the end of diastole, the ventricle being quite relaxed and unfilled, and systole starting under these conditions, it would progress longer than usual before the parietes would press sufficiently upon the contents to force them through the aortic valves. With the mitral orifice and valve normal, systole begins upon a distended ventricle, the pressure rises rapidly from the start, and the overflow into the aorta promptly begins.

Therefore we conceive that the problem *will* be demonstrated in favor of the ability of mitral constriction to produce exaggerated delay of the pulse, which implies elongation of the presphygmic interval.

The following are prominent among the facts determined by this last research:

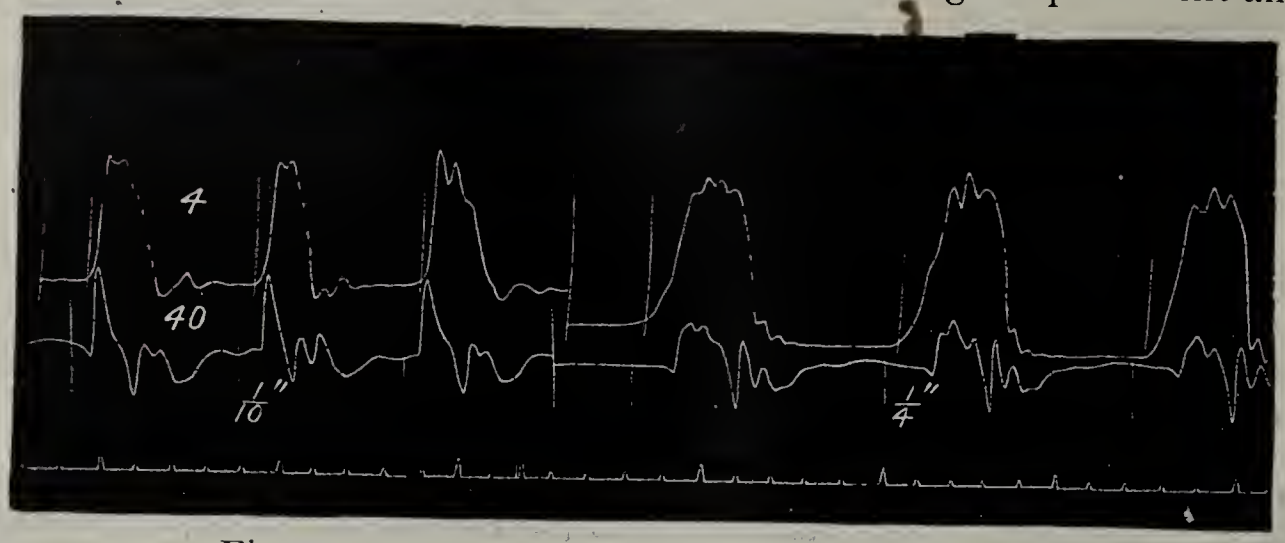


Fig. 58.—Effect of mitral contraction shown on the schema.

1. The duration of the presphygmic interval is *increased* in slow ventricular contraction; infrequent pulsations; relatively high arterial pressure; heavy aortic valves; mitral insufficiency; and probably mitral contraction.

2. The duration of the presphygmic interval is *diminished* in quick ventricular contraction; frequent pulsations; relatively low arterial pressure; and aortic insufficiency.

THE INCREASE OF INSANITY IN THE UNITED STATES —ITS CAUSES AND SOURCES.

BY FOSTER PRATT, M.D., KALAMAZOO, MICH.

(Read to the American Public Health Association, Nov. 15, 1883.)

The increase of population necessarily increases the aggregate of insane. The important question, and the one mainly to be discussed, is this: Does insanity increase faster, *in proportion*, than does the population?

The facts, on which the following discussion is based, are taken mainly from the census of 1880, in connection with that of 1850, 1860 and 1870. The reports of the number of insane in the preceding decades are known to be defective in their aggregates, but whatever error there is in the total, the error is fairly and proportionately distributed between the several classes of population, and to this extent they may be used as standards of comparison.

The census of 1880, manifestly the fullest and most accurate ever made by our Government, is itself defective; while it makes manifest the increased ratio of insane to population, it does not (because of certain omissions) enable us to state what the precise ratio is.

The political issues of slavery, for thirty years, have concentrated the attention, even of scientists, to the

one race relation of whites and blacks; but other race relations and their effects will now receive their due share of attention. The entire population of the United States is considered in three classes—native white, foreign white and colored.

Beginning with 1850 (and using round numbers) we find, that during the thirty years intervening between 1820 and 1850, 2,250,000 emigrants came to the United States; and that, out of a total population, in the latter year, 23,191,000, 2,240,000 of foreign born yet remained alive and in the country. The total number returned insane, by the census of this year, was 15,610, of which 2,049 were of foreign birth. It thus appears that the foreign born—about one-tenth of the population—furnished in 1850 one-seventh of the insane.

During the following decade, 2,814,000 emigrants cast their lot with us; and in 1860, in a total population of 31,443,000, 4,136,000 were foreign born. The total number of insane, then in the United States, was reported to be 23,999, and of this 5,768 were foreign born—nearly one-eighth of the population—furnishing one-fourth of the reported insane.

Between 1860 and 1870, 1,878,000 emigrants arrived; and in 1870, out of a total population of 38,538,000, the foreign born numbered 5,567,000. The aggregate of insane for that year was 37,432, of which 11,221 were charged to the foreign born element; the foreign born—one-seventh of the population—furnishing nearly one-third of the insane. This decade included the four years of war.

During the last census decade, from 1870 to 1880, our foreign accessions were 2,742,000; and in a total population of 50,155,000 in 1880, the foreign born were 6,679,000. The aggregate number of insane in 1880 (greatly increased, as we have seen, by greater care and accuracy in the census work) was 91,997; and of this number 26,346 were foreign born; a little less than one-seventh of the population furnishing more than one-fourth and nearly one-third of the insane—13⅓ per cent. of the population producing 28 75-100 per cent. of the insane.

Admitting that census tables, prior to 1880, fail to give the full *aggregates* of the insane, it will be safe, for present purposes, to assume, that, whatever errors there may have been in the totals, the error of each census, was fairly distributed between the various elements of population; so that the census *proportion* of insane, to each class of population, was fair and just. If this be conceded—and a close study of the census tables and other sources of information, shows that it should be—we are enabled to reach several interesting and significant results.

1. Beginning with 1860—while the foreign born population had increased, since 1850, nearly 100 per cent., the foreign born insane had increased 181 per cent.

2. That at the close of the next decade in 1870, the total foreign born had increased only about thirty per cent., but the insane of this class had increased nearly 100 per cent.

3. In 1880, the foreign born had increased less than twenty per cent., but their insane had increased 150 per cent.

A statement of the proportion of insane to each class of population—native and foreign—at each census, shows, very clearly, the relative rate of increase.

In 1850, of native population, there was 1 insane in 1,5,45; and of the foreign born, 1 in 1,095.

In 1860, of native born, the proportion was 1 in 1,559; and of foreign born, 1 in 717.

In 1870, natives furnished 1 in 1,258; and foreign, 1 in 497.

In 1880, native population shows 1 insane to 662; and foreign born, 1 in 250.

(It should be borne in mind that, in the foregoing statements, the inaccuracy of the census aggregates, in all vital statistics, prior to 1880, is conceded, but their relative fairness, in the distribution of insane, is assumed.)

Thus it becomes manifest, that while the proportion of native insane to native population remained nearly the same, in 1850, 1860, and 1870, the proportion of foreign insane, in the foreign element, rapidly increased from 1 in 1,095 in 1850 to 1 in 497 in 1870; and when we reach the approximately accurate aggregates of 1880, we find the native insane amount to 1 in 662 of native population, while the foreign born insane are 1 in 250 of foreign born population—and that nearly one-eighth of the aggregate population furnishes nearly one-third of the aggregate insane.

But in fairness to the foreign white element, the two prominent factors of our native population—white and colored—should be separately considered. If this be done, on the basis of the last census, we find, that the native colored races (Negroes and Indians), furnish 1 insane in 1,096 7-10; the native white, 1 in 618 12-100; and the foreign born white, 1 in 250; the first being about 1 in 1,000, the second 1 6-10 in 1,000, and the last 4 in 1,000. These differences are very marked. The black race, notably afflicted (especially in the Southern States), with idiocy, is freest of all from insanity. The foreign element bring with them few idiots, but they generate an astonishingly large proportion of insane. Our native white population show more of both, than (until lately) was believed by some to exist; but the causes of the increase will be subsequently discussed.

Your attention is now invited to the following table:

This table has been constructed of figures furnished by the "census compendium" of 1880, recently distributed.

The figures of its first three columns are derived from table 1 of the compend, thus:

"Native *White* Population" is obtained by subtracting "Colored" and "Indian" from "Native," of the census table; "Foreign *White*," by subtracting "Chinese" and "Japanese" from "Foreign," of the census table; and "Colored Races," by adding "Colored," "Indians," "Chinese," and "Japanese" of census table.

This method of obtaining "Native White" was found to be better for the present purpose than to copy the "Native White" figures census table No. 28, because of certain unexplained discrepancies between census tables Nos. 1 and 28. Census table No,

1 is consistent with itself, and balances properly in all its parts; and by following it in the construction of these "Population" columns the table becomes harmonious with itself and with the census table also.

The blacks, by their great preponderance, are the essential element of the "Colored Races" in the table; for, while the blacks alone number 6,580,793, Chinese, Japanese and Indians together number only 172,220. By the consolidation of these elements the table is simplified, and no injustice is done to any class in the study of their relations to insanity and idiocy.

The three columns of "insane" are constructed from census table 138; subtracting the "colored" and "Indian" elements from the "native" insane, gives "native *white*" insane; subtracting the "Chinese" and "Japanese" elements from "foreign" insane, gives "foreign *white*" insane; and "colored" insane of the census table (including, as it does, the insane of all the colored races, whether native or foreign), has been transferred, without change, to this table. As before remarked, this simplifies the table, facilitates comparison, and does no injustice.

The three columns of "idiotic" have been similarly constructed from census table 139, and are given to complete the tabular statement of the mental conditions of our population as shown by the census.

The reason for constructing this table, so as to show the relations of "Northern States," "Southern States" and "Territories" to insanity and idiocy, will be obvious upon study, and need not be stated.

This rearrangement of census figures presents (which the census tables do not) the three predominant classes of our population by geographical sections, in a shape for convenient examination and comparison.

TABLE.

Constructed from tables I., CXXXVIII and CXXXIX of the Census Compendium of 1880, to show, by geographical sections, the actual and relative contributions, made by "Native Whites," "Foreign Whites," and "Colored Races" (native and foreign) to the "Insane" and "Idiotic" classes found, by said census, in each State and Territory of the United States. (See tables.)

From this table we find by calculation:

1. That the proportion of insane to native white population, in the Northern States, is 1 in 597; in the Southern States, 1 in 660; and in the District of Columbia and Territories, 1 in 748.

2. That among the foreign white, the proportion, in the Northern States, is 1 in 248; in the Southern States, 1 in 283; and the District and Territories, 1 in 236.

3. That among the colored race, the proportion, in the Northern States, is 1 in 545; in the District and Territories, 1 in 680; and in the Southern States, 1 in 1,235.

4. That the average proportion of insanity among native whites, in the entire United States, is 1 in 618; among foreign whites, 1 in 250; and among the colored races, 1 in 1,097; and that the total average, for the entire country, of all population, is 1 in 545 $^{19}/_{100}$.

5. The high rate and the slight variations of the proportions of foreign insane to foreign population, in all sections, should be noted.

6. The large proportion of insanity among the colored races, in the Northern States and Territories, as compared with that in the Southern States, is also noteworthy.

7. The different proportions of native white insane to native white population, North and South, and the causes of it, demand careful study and will be briefly discussed in this paper.

8. It is a significant fact that the Northern States, including the District and Territories, containing about sixty per cent. of the entire population, have about seventy per cent. of its insane; and that this ten per cent. of proportional excess is more than supplied by the excess of foreign insane over the number that would result if the ratio of native insane to

SECTION 1—NORTHERN STATES.

Northern States.	Population.			Insane.			Idiotic.		
	Native white.	Foreign white.	Colored races.	Native white.	Foreign white.	Colored races.	Native white.	Foreign white.	Colored races.
California	549,525	217,656	97,513	835	1,533	135	437	56	14
Colorado	151,948	39,178	3,201	58	33	8	71	4	2
Connecticut	480,906	129,863	11,931	1,182	509	32	752	50	15
Illinois	2,447,787	583,364	46,720	3,943	2,115	76	3,717	406	47
Indiana	1,794,649	144,149	39,593	2,844	618	68	4,468	175	82
Iowa	1,352,983	261,617	10,015	1,707	838	9	2,082	218	14
Kansas	842,088	110,067	43,941	720	241	39	924	100	59
Maine	587,977	58,875	2,084	1,367	168	7	1,271	52	2
Massachusetts	1,320,528	443,254	16,303	3,301	1,784	42	1,847	173	14
Michigan	1,226,080	388,480	22,377	1,807	951	38	1,836	318	27
Minnesota	509,233	267,651	3,889	383	757	5	526	191	12
Nebraska	352,368	97,396	2,638	246	200	4	285	16	4
Nevada	33,322	20,234	8,710	14	16	1	14	2	2
New Hampshire	299,949	46,280	762	927	129	..	673	25	5
New Jersey	870,489	221,528	39,099	1,363	960	82	932	79	45
New York	3,805,569	1,210,453	66,849	7,595	6,321	195	5,494	529	61
Ohio	2,723,089	394,831	80,142	5,151	1,073	162	6,000	307	153
Oregon	142,084	20,991	11,693	247	114	17	168	9	4
Pennsylvania	3,609,343	587,673	85,875	5,933	2,140	171	6,089	304	104
Rhode Island	195,973	73,966	6,592	441	229	14	199	24	11
Vermont	290,259	40,959	1,068	829	181	5	744	56	3
Wisconsin	904,209	405,499	5,879	1,041	1,476	9	1,365	411	9
Totals	24,490,358	5,763,874	609,784	40,994	23,276	1,119	39,895	3,552	689

SECTION II.—SOUTHERN STATES.

Southern States.	Population.				Insane.				Idiotic.			
	Native white.	Foreign white.	Colored races.		Native white.	Foreign white.	Colored races.		Native white.	Foreign white.	Colored races.	
Alabama	652,455	9,730	600,320		1,064	46	411		1,348	6	869	
Arkansas	581,314	10,217	210,994		616	13	160		1,044	6	324	
Delaware	110,693	9,467	26,448		121	29	48		210	6	53	
Florida	132,714	9,891	126,888		153	15	85		208	5	156	
Georgia	806 359	12,547	725,274		1,251	35	411		1,492	7	934	
Kentucky	1,317,672	72,507	271,511		2,137	392	345		3,008	18	487	
Louisiana	401,297	27,657	484,992		530	168	304		569	18	466	
Maryland	641,892	48,801	210,250		1,353	245	259		927	32	360	
Mississippi	470,240	21,158	652,199		675	40	432		799	2	778	
Missouri	1,811,339	211,487	145,554		2.298	867	145		3 005	125	242	
North Carolina	863.501	31741	532,508		1,586	5	437		2,134	....	1,008	
South Carolina	383,428	7,677	604,472		616	35	461		799	7	782	
Tennessee	1,122,154	16,677	403,528		1,972	68	364		2,802	15	716	
Texas	1,082,757	114,480	394,512		1,052	206	306		1,540	96	640	
Virginia	866,168	14,690	631,707		1,619	100	692		1,832	12	995	
West Virginia	574,535	18,260	25,862		849	86	37		1,314	7	41	
Total	11,818,818	641,987	6,047,019		17,892	2,270	4,897		23,031	362	8,811	

native population, in the North, were made the ratio of foreign population. To illustrate: The average ratio of insane to all native population (white and colored) in the Northern States, is 1 to 642. If this proportion be applied to the 5,763,874 foreign born living in the North, the number of insane resulting among them would be 9,240 instead of 23,989, as it now is—a difference of 14,749, which is much more than ten per cent. of proportional excess of insane to population in the Northern States and Territories.

9. The comparison of the productive ratio of insane in the foreign population (which is the most productive) with that of the colored population in the Southern States (which is the least productive) is very striking. The foreign element in the Northern States and the colored element in the Southern States are nearly equal in numbers; but the former exceeds the latter in the production of insanity by the proportion of nearly five to one!

10. The total insanity found by the census, 1880, is 91,997.

If the colored average for the United States were applied to the entire population, the total number insane would be 45,721—about half what it is; if the native white average were similarly used, the number insane would be 81,158—more than 10,000 less than it is; but if the foreign white average in the United States were the rule for the entire population, the number of insane would be 200,623—or, 118 per cent. more than it is. The application of these various ratios to the entire population, demonstrates the vast significance of seemingly slight differences in the ratios.

SECTION III.—THE DISTRICT OF COLUMBIA AND TERRITORIES.

District of Columbia and Territories.	Population.				Insane.				Idiotic.			
	Native white.	Foreign white.	Colored races.		Native white.	Foreign white.	Colored races.		Native white.	Foreign white.	Colored races.	
Arizona	20,743	14,417	5,280		9	10	2		4	4	3	
Dakota	81,590	51,557	2,930		30	39	3		40	24	7	
District of Columbia	100,901	17,105	59.618		368	446	124		44	10	53	
Idaho	22,418	6,595	3,597		8	8	..		18	..	..	
Montana	25,629	9,756	3,774		26	34	2		12	5	2	
New Mexico	100,727	7,994	10,844		132	12	4		108	1	2	
Utah	98,930	43,493	1,540		56	99	2		105	43	9	
Washington	54,583	12,616	7,917		64	67	4		43	1	..	
Wyoming	14,501	4,936	1,352		2	2	..		2	..	3	
Totals	520,022	158,469	95,952		695	713	141		93	77	..	
Recapitulation by Sections.					INSANE.				IDIOTIC.			
Northern States	24,490 358	5,763,874	609,784		40,994	23,276	1,119		1,348	6	869	
Southern States	11,828,318	644,987	6,047,019		17,892	2,270	4,897		1,044	6	324	
Territories and District of Columbia	520,022	168,489	95,952		695	713	141		210	6	53	
Totals	36,828,698	6,574,330	6,752,755		59,581	26,259	6,157		2,602	18	1,246	
Recapitulation by Classes	POPULATION.				INSANE.				IDIOTIC.			
Native white	36,828,698				59,581				63,311			689
Foreign white	6,574,330				26,259				4,007			8,811
Colored races	6,752,755				6,157				9,577			77
*Totals in United States	50,155,783. Population.				91.997, Insane.				76,895, Idiotic.			

A careful study of the table will develop other interesting and important illustrations of the relations of this question to races and sections.

It is thus made apparent that the aggregation of insane has increased with the increasing aggregate of population; and that the proportion of insane to population has steadily increased by accumulation or otherwise since 1850. But there is another and very important question to be considered; are *new* cases of insanity increasing in a ratio greater than that of the population? Are morbid influences insidiously operating on our growing population, which so deprave our vital condition and forces as to produce insanity, year by year, at a rate per cent. greater than the rate per cent. of our growth? It seems clear, from the preceding study of the census, and the inevitable deductions from its statistics, that this important question must be answered in the affirmative. But the census tables, as before stated, furnish no data that fixes the rate of increase. It tells us how many were *found* insane in 1880, but it does not tell us how many *became* insane that year, and if it did, no previous census furnishes a like statement

*It is scarcely necessary to call attention to the fact that these final "totals" agree with the footings of Tables Nos. 1, 138 and 139, of "Compendium of the Tenth Census."

for any previous year, as a basis of comparison. We are compelled, therefore, to ascertain, by other means, whether we are or are not developing an increasing ratio of insane to population. This will be attempted, though the increased ratio, if found to be a fact, cannot be definitely stated. But if we can find satisfactory proof that our annual insane product is unduly increased, we cannot afford to defer action upon it until we are able to make a mathematical statement of the ratio.

Insanity is increasing, manifestly, from three causes: First, the intense life of our native population. This has been so much discussed of late that little need be said of it now. The writer quotes on this point the following from one of his own recent papers: "We see more, hear more, read more, think more, feel more, know more, do more and worry more in ten years than our grandfathers did in thirty. Where does the strain of this intensity fall? Not on our physical strength; for, with all we do, we do not labor as hard, physically, as did our fathers before us. This strain of intensified life falls, of necessity must fall, on the brain and the nervous system." The rapid increase of paresis and other forms of brain and spinal degeneration among our ablest, busiest and best men furnishes fearful proof of the effects of overtaxing the nervous forces. Second, our insane aggregate is increased by immigration. It has been shown by the census of 1850 that the proportion of insane in the foreign-born population at that time was nearly the same as in the native population. Since that year each succeeding census has revealed a rapidly increasing proportion of insane in the foreign class. Soon after 1850 we find the Legislatures of Massachusetts, New York and Maryland passing acts to protect their people from the rapidly increasing burden of foreign paupers, criminals and insane arriving at their respective ports. This simultaneous legislative movement in three States, similarly situated with reference to foreign arrivals, indicates that a new and serious evil demanded a remedy. It also fixes the date of its beginning. To what was the evil due? European municipalities, burdened by defective and criminal classes, seeing, in our hospitality to immigrants, a chance of relieving thousands from a heavy tax, began, in a quiet, unobserved way, to encourage, and aid, and at times almost compel their defective population to come to us. That they did come, and that they have continued to come, each succeeding census, not to speak of other evidences of the fact, furnishes incontrovertible proof. The foreign-born had, of insane, in 1850, one in 1,095; in 1860, one in 717; in 1870, one in 497, and in 1880, one in 250. Such a ratio of insane, much greater than that of the population producing it, could not have resulted from the operation of ordinary or natural agencies.

The tables, compiled and published by the Bureau of Statistics at Washington, show that during the thirty years, between 1850 and 1880, the immigration proper to the United States amounted to the immense aggregate of 8,033,235. The great majority of this element was a valuable acquisition. They brought an aggregate of money, estimated by competent judges, to be equal to one-half our Federal debt; and their capacity as laborers and producers was an addition to the capital of the country more than equal to the whole debt. Nor is this all; they added largely to the literary, scientific, mechanical, and other skilled activities and industries of our people. But with these come others, and they still come, who are a plague spot on our vital and social conditions, and a blot on our vital statistics.

The "assisted emigrant" began to be numerous twenty-eight years ago, but he was never officially designated till last year. He became especially numerous in 1863 and 1864, when the bounties of "loyal States" filled their quotas with the able-bodied criminals and paupers of Europe. The Union army surgeon, of experience, knows something of this. Officials of European municipalities, having charge of their poor, believe in the law of heredity, they understand its effects, and the poor family, rich in children, but tainted with an insane heredity, and likely or liable to become a public charge, is shrewdly selected by these wise officials to "leave their country for their country's good." The shiftless, the improvident, the lazy, the social "crank," the religious "crank," and the political "crank," all come—some voluntarily and many involuntarily—some assisted by the beadle and some by the constable—but they come, to this land of freedom—freedom to live at some other man's expense. But the mere tax, the money aspect of this blight, is of little consequence compared with the fact that so many of them come with inherent qualities that in the next generation dilute and unbalance the brains of our native people, taint their vitality, and vitiate their morals; and, third, insanity is increased among our native whites, by intermarriage with this foreign, tainted element. We have found from the census of 1880 that this foreign-born element—one-eighth of our population—furnishes one-third of our paupers, one-third of our criminals, and one-third of our insane. Can this immigrant element, with its large proportion of insane, intermarry, as they do, by the million, with our native men and women without imparting their large proportion of inherent defects to their children? Do not these children (native born Americans, of course,) increase the proportion of insane to native white population, and still further add to the mischief done by corrupting and increasing the tendencies of the native stock to develop the mental defect? Who can doubt that they do? This body—this American Public Health Association—not to speak of the medical profession—is composed of men who measurably comprehend and who fully believe in the law of heredity, that law by which the qualities, good and bad, of parents, are imposed on their children—I ask you if this intermarriage of millions, more or less tainted by Old World defects, with our sounder native stock, can fail to increase the ratio of native insane to native population? Which of you will answer no?

In 1870, according to Dr. Jarvis, there were 500,000 of this native born, mixed breed, of the first generation, mingled with our population, and 500,000 more of the second and third generations. Table

107, of the census of 1880, shows this mixed element, the mixed progeny of natives and foreigners, to amount to nearly 2,000,000.

Attention was called by note 7 (following the table) to the larger ratio of insane among the native whites of the Northern States, than is found in the same class in the Southern States. The census shows that nine-tenths of the foreign born are found in the Northern States, and nearly all this mixing of breeds is there; is it strange, when examined by this light, that the native whites of the North show a much larger proportion of insane than their Southern brethren of the same class, among whom this foreign element is small, and these mixed marriages are relatively few? These figures are full of meaning to the native whites of the North; they show that we are developing a much larger proportion of insane than the native whites of the South; they show, too, the causes of it, and we have a special interest in finding remedy or relief.

Finally, can there be a rational doubt—indeed, is it not certain—that the influences and agencies, thus briefly sketched, have already so tainted our native stock, with their hereditary and transmitted traits, that our annual insane product is increasing by a ratio to population notably larger than it was two years ago? Would we be more sure than we now are of the general fact, if census statistics had been so shaped as to enable us to state the precise mathematical value of the fact? If, then, it be a fact, shall we do our duty to the people and the country, if we neglect to give the warning which it is the province of science to give, and which, if we are true men, we will give, that all proper agencies may be invoked to check or to mitigate the mischief?

Mr. Wines, special agent in charge of the census statistics of defective classes, seems not to have observed the significance of his own results on this subject. "The tendency to insanity among the foreign population," he says, "is especially worthy of attention." "*It may be accounted for*," he continues, "*in many ways*" (italics are ours); "for instance, by change of climate and habits of life, by the increased anxiety and effort to advance in the scale of social respectability, by homesickness, and, in general, by the removal of the props which sustain and steady a man who does not emigrate, but remains in the vicinity where he was born." These, it is true, are exciting, but they are not predisposing causes of insanity, and they are entitled to due consideration; but how insignificant they are, as producing causes of insanity, when compared with the physical agency of a tainted heredity. But he adds (and as if he was accounting for the whole difficulty), "The same increased tendency to insanity may be discovered (but in a less marked degree) in Americans who remove from one section of the country to another, especially from the Atlantic to the Pacific coast." Where he finds his authority for this latter assertion he does not say. The statistics of the Territories (excluding the District), as furnished by his own tables, show that the proportion of native white insane to native white population is 1 in 1,281—the smallest proportion of insane to be found in any large locality in the United States. In California the proportion of insane in the same class is 1 in 658, nearly equal to the proportion in the Southern States, and notably less than in the Northern States. In Oregon, with a small native white population, the proportion is 1 in 575, a proportion which is a little larger than the average of the Northern States. But what a very unsatisfactory basis it is on which to construct a theory to account, by moral disturbances, for the deteriorating effects of an imported and a propagated heredity that produces in 6,000,000 of foreign people, and from more of mixed breeds, a proportion of 1 insane in every 250 of population. Furthermore, before we can accept as satisfactory Mr. Wines' statement of the causes of this remarkable ratio of insane to the foreign born, we must ask him to go back to 1850, and explain why it is that the causes he now assigns for the difference, which were just as numerous then as now, and just as potent then as now, did not produce results then as now; for then the proportion was nearly equal in all white classes (native and foreign), while now it is three of foreign to one of all white natives. It will be no answer to this proposal to say that the statistics of 1850 are defective. It is admitted that they are defective *in their aggregates*, but not in their relative *proportions* and *fairness* to the different classes of population.

If the increased aggregate of insanity and the increased ratio of its production in the United States may now be assumed to be proved, the next thing to be considered by us, as practical men, is the remedy. "What are we going to do about it?" It is a question we must carefully consider before we express an opinion, much more before we offer advice.

So far as the increasing ratio of insanity to population is enhanced by the unsanitary life and by the intense exhausting activities of our native population, it is enough, for present purposes, to say that the remedy for all these evils must be found in the diffusion of required knowledge and the operating of nature's conservative laws. If the intensity of our life prove to be the chief factor, our people must learn to live within their vital as well as their pecuniary income.

But the important practical question relates to the abatement of the unnatural increase of insanity by immigration—to the turning back, from our national thresholds, those who come here only to fill to repletion our asylums, poor-houses and prisons; to burden our humanity and our pockets to provide them accommodations and maintenance; and who (worst of all) deteriorate, by inexorable laws and agencies of heredity, the mental, moral and physical endowments of a nation. What are we to do with the defective immigrant?

What do European governments do with him? By the most disinterested eloquence they induce him, and by the most generous policy they "assist" him to become an immigrant; and so they solve their problem. Is any one simple enough to think that this policy is announced in their "blue book," "red book," or any other kind of official book or form? When this policy and practice are charged on their officials, does any one expect them to admit it? One

can easily imagine the reproachful expression of injured innocence, coupled with the complacent folding of his hands across his capacious and compassionate bowels, with which Mr. Bumble would receive such an intimation. After he and his official associates had completed and put in use their brilliant invention of work-house diet, consisting of "much water and a little oat-meal," it is also easy to imagine his deprecating gravity when charged with a deliberate purpose to starve the poor to death or—to emigration. But we do not need to resort to fiction nor to Europe to find illustrations of the way the official almoners of public charity receive suggestions that their Bumbleian "political economy" is born of a tricky and dishonest selfishness. Who here has not noticed the American overseer or superintendent of the poor and his air of self-satisfied reticence just after assisting, with charitable railroad fare, a poor family to—the next town?

But what have we done, in the past, with the defective immigrant? As stated in another place and for another purpose, the Legislatures of several seaboard States having ports of entry have tried, by law, to protect their people from the unnatural burthen. But all in vain. They, too, have tried the "move on" policy, and these foreign "poor Joes" have moved on and are now "moving on," by tens of thousands, to other States in the interior, to be, wherever they are, a public charge, and a living pestilence. And what have these States, in the interior, done? Nothing—except to bear a great, a needless, but a hitherto unavoidable burthen.

What can the State do to mitigate or abate these evils? Nothing—absolutely nothing. To stop the immigrant before landing is to encroach upon the exclusive power of Congress to regulate commerce. After he has landed, it is too late to make any law effective to protect the public from the imported burden. It is true, this mere *right* of a State to inspect immigrants to ascertain whether any are likely to become a public burden, is recognized; but every act ever passed by a State to efficiently exercise the right, has been declared unconstitutional and void.

The leading case, in which the power of the States in this matter was decided, is that of Gibbons vs. Ogden, 9 Wheaton. This has been followed in Brown vs. the State of Maryland, 12 Wheaton; New York vs. Miln, 11 Peters; Groves vs. Slaughter, 15 Peters; passenger cases, 7 Howard; and in February last, People of New York vs. Compagnie Germale Trans-Atlantique, published in the Albany *Law Journal* of April 7 last. Still later and the case had been decided in California by the Circuit Court, in which the precedents were faithfully followed. These references are given to aid any who wish to investigate the legal aspects of our question. They contain much interesting reading.

If States cannot protect themselves, have we no other resource—or must we sit down and stolidly submit to the eating of our substance and the tainting of our blood by the outcasts and pariahs of Europe? Yes, there is, there must be a way to resist this tide of cranks, deadbeats and lepers—a way, too, not in conflict with the Constitution, nor with the healthy interests of commerce or of proper immigration. You must appeal to Congress, whose jurisdiction in the premises is supreme and exclusive. The necessity of an appeal to our Federal Legislature brings this paper to this body of sanitarians, whose members come from all the States, all being affected by the curse, and especially the Northern States and Territories.

Before we consider what Congress may do, let us inquire what Congress has done? For thirty years the evils herein described have been manifest, and several States have tried, but vainly, to protect themselves. But Congress has done nothing—until August, 1882—when it passed an act to regulate immigration. By this act all aliens arriving by "steam or sail vessel" at "any port in the United States" are required to pay a tax of fifty cents to create a fund for the care of arriving and distressed immigrants; this fund is to be expended at the ports of arrival only. How can such an act help the interior States to care for the pauper immigrants that swarm to their borders? But it appears that this law is but imperfectly executed—that in some localities there is no attempt to collect the tax or to enforce any provisions of the act. For instance: Immigrants do not arrive at Detroit and Port Huron by "steam or sail vessel," they come by rail. They come by "steam or sail vessel" to Canadian ports, where no United States tax is collected. The reports of the Bureau of Statistics show that nearly 100,000 immigrants entered our territory at these two points during 1882. Of course they pay no tax, and the immigrants, or the Grand Trunk Railway, was $50,000 ahead. The passage of such an act, insufficient even to take care of the immigrant at New York, and wholly inoperative at Detroit and Port Huron, and of no benefit to the interior States, is all that Congress has ever done to regulate immigration, and this has, and can have, no effect to prevent the arrival of improper persons.

The question remains—What shall we ask Congress to do to mitigate and prevent these great and growing evils complained of? Shall immigration be stopped or seriously impaired? No, a thousand times and for a thousand reasons, no. But the insane, the pauper, and the moral and physical leper we do not and must not admit.

In answer to the difficult and important question, what shall we ask Congress to do, the writer offers, with great diffidence, the following suggestions for your consideration:

1. The true place to prevent the coming of the unwholesome and the dangerous immigrant is not at the port or point of *entry*, but at the port of *departure*. Of this it may be said, at once, we cannot enforce our laws and rules on a foreign soil and under a foreign Government. Perhaps we can—wait a little and see.

2. The Supreme Court of the United States has decided, practically, that the regulation of immigration is a regulation of commerce, and that this power belongs exclusively to Congress. The regulation of that class of immigrants that should never be permitted to land, because of the danger they bring to public health, is, after all, akin to *the question of quarantine* and should be under the charge of medical ex-

perts. A constitutional basis beyond controversy and a grand function are furnished right here for a national board or bureau of health and immigration.

3. Organized properly, it should have at all ports in the United States, where immigrants arrive, all needed agents and representatives; but more important than all, its agents should be attached to consular offices or agencies abroad wherever needed.

4. Aliens proposing to travel or trade temporarily on our soil should so declare or affirm at a consular office, and receive a consular certificate showing their avowed purpose.

Every other alien proposing to emigrate to the United States should be examined; should furnish proof (in form and kind such as the law may specify) to satisfactorily show that he has never been convicted of crime (political offenses excepted); that he is not insane and never has been; that the same is true of his wife and children if he have them; that insanity has never afflicted his parents, or either of them, and that he is not a pauper, and never has been because of any permanent inability to support himself by labor. If the proposed emigrant is found to fulfill all legal requirements, and not likely to become a public burden, a certificate, jointly executed by the consul and the public health agent, containing his full personal description, and showing his healthy character, should be given him. This consular ticket, in effect, will be much like the clearance papers given to a vessel departing for one of our ports, which is often called "a clean bill of health."

The cost of the plan may be defrayed as the existing law is—by taxing all immigrants. But this should not be done. This Government should be ashamed to levy such a tax. A law that will effectively protect us from defective immigrants will soon save its cost of enforcement by reduced taxes in the States to support them. It will cost less to enforce an efficient law than it now costs the people to do nothing.

Mr. President and gentlemen, if we use our influence in our various relations, and vigorously present the *facts* disclosed by the census of 1880, we shall soon be able to secure favorable action by Congress.

The proposed legislation may be opposed, but not openly, except by those ignorant of the extent of the danger. The statistics—the facts—must be our chief weapons, and with them the battle can be won.

At the conclusion of the reading of the paper, Dr. Kedzie offered a resolution expressing as the sense of the Association that legislation should be taken by Congress at its coming session to put a stop to the coming to this country of the criminal and pauper classes and those with an insane heredity, and, on motion, the rules were suspended for the purpose of taking immediate action upon the resolution.

Dr. Wight hoped that the resolutions would go to a committee for consideration. He was not prepared to charge the governments of Europe with wilfully and maliciously shipping off their criminals and insane people to this country.

Dr. Devron said that in New Orleans it is impossible to go a block without meeting foreign paupers and foreign beggars exhibiting their deformities and asking charity.

Dr. Walcott, President of the State Board of Health of Massachusetts, said it is an indisputable fact that our poor-houses are filled with foreign paupers, our hospitals with foreign cripples, and our insane asylums with foreign insane persons.

Dr. Ames said that to defer action for a year is to lose a year, and in view of the slowness with which Congress acts in international matters, it is best to lose no time.

Dr. Gihon moved that the resolutions be referred to the Advisory Committee; that the Chairman submit the same to its various members, and if a majority thereof favor them, that they be transmitted to Congress.

The question of expediency was discussed pro and con by several members, and then a motion to lay the resolutions on the table was lost, 15 to 23.

Dr. Gihon then withdrew his motion.

A motion by Dr. Wight, to refer the resolutions to a special committee, to report at the next meeting, was lost.

The resolutions were adopted, 30 to 1.

NEW ANÆSTHETIC MIXTURE DEVISED BY WM. A. BYRD, M.D., OF QUINCY, ILL.—ITS COMPOSITION AND EFFECTS.

BY CHARLES WESLEY ROOK, M.D., QUINCY, ILL.

This is a compound anæsthetic, recently prepared by Dr. Wm. A. Byrd, Quincy, Ill., and so far as I know, he is the only surgeon who is, at present, using it. It is composed, by measure, of bromide of ethyl, one part; chloroform, three parts; alcohol, four parts. These substances, mixed, form a clear solution, of a pleasant odor, and of a warm, sweetish taste.

HISTORY OF THIS ANÆSTHETIC.

Dr. Byrd, not being satisfied with the anæsthetics in general use, having seen two deaths from chloroform, one occurring in his own practice, and disliking the stimulating or exciting properties of ether, began experimenting to see if he could not discover or prepare an agent which would better suit him for anæsthetic purposes. Knowing the physiological actions of chloroform, that the greatest danger from its use lay in the extreme anæmia of the brain and nervous system; that in this condition of anæmia, there was not sufficient blood carried to the nervous centers controlling the organs of circulation and respiration to enable them to continue their functions, and thinking that if he could combine with the chloroform, some agent that would overcome this tendency to extreme anæmia, without impairing the anæsthetic properties of chloroform, his object might be obtained.

Having a knowledge of the physiological properties and actions of ethyl bromide, and its power of causing congestion of the face and brain, he was led to begin experiments with these two agents. The result of these experiments proved to him that if these two agents were combined in the proportions of three parts, by measure, of chloroform to one part of ethyl bromide, the anæmic and depressing action of the chloroform was counteracted by the ethyl bromide,

and that the excitement and congestion of the brain caused by the ethyl bromide was antagonized by the chloroform, so that, in the production of anæsthesia, there was no noticeable or marked change in the blood supply of the face and brain.

PHYSIOLOGICAL ACTIONS OF THIS ANÆSTHETIC.

I have administered this anæsthetic to a number of patients, varying in age from early childhood to adult life; to those enfeebled by disease or suffering, and to those apparently healthy; for operations comparatively trivial, and for others which were protracted and serious; inducing and sustaining complete anæsthesia, in some cases, only for a few moments, while in others for more than an hour; and in all these cases, with their varying circumstances and conditions, I have observed a remarkable similarity in the physiological actions of this anæsthetic. The stage of excitement or intoxication is brief, sometimes absent; if occurring, is never violent. The stage of spasmodic rigidity of the voluntary muscles seldom occurs; when occurring, it is not extreme. Following these stages, when they are present, or within a few minutes from the commencement of the inhalation, the stage of complete anæsthesia is induced, when any unfavorable or alarming conditions or symptoms occurring in the preceding stages, as excitement or rigidity, will be relieved, so that the vital functions are carried on as regularly, and apparently as effectually, as if the patient was in a natural physiological sleep.

The time required to produce complete anæsthesia is from one to three minutes in children, and from three to five, and possibly eight minutes in adults. When inhaled, and especially if inhaled through the nostrils, patients will sometimes complain of a choking or suffocating feeling, probably due to some spasmodic condition of the glottis or larynx, which is quickly relieved by requesting the patient to inhale, through the mouth, three or four deep inspirations. Sometimes, though very seldom, coughing will be caused, perhaps due to the action of the anæsthetic vapor upon the over-sensitive bronchial mucous membrane, but it is quickly checked by pushing the anæsthetic a little more rapidly. Nausea and vomiting may occur, more apt to when administered soon after eating, and, like coughing, may be checked by crowding the anæsthetic a little faster.

Effect upon the eyes:—Soon after the inhalation is begun, and especially if the stage of excitement is present, the pupils are dilated, but when complete anæsthesia is induced, they are more or less contracted; the conjunctiva is usually insensible to irritation, but I have seen a case in which the degree of anæsthesia was sufficient to admit of the thorough and extensive application of the actual cautery, and yet the conjunctivæ remained sensitive, and the pupils responded quickly to light.

Effect upon the circulation:—At the commencement of the inhalation, the pulse, either from excitement or in anticipation of the coming operation, would naturally be somewhat quickened, but when complete anæsthesia is induced the pulse becomes slower, fuller and stronger.

Effect upon the respiration:—This is at first stimulated, but when insensibility is induced it becomes slower and more regular, very much resembling the respiration of natural sleep.

Effect upon the temperature:—It is generally lowered more or less, as the skin is usually moist, and occasionally free perspiration occurs.

During the stage of complete anæsthesia, the eyelids are closed, the face retains its natural color, so that the countenance looks peaceful and placid.

The duration of the stage of anæsthesia is variable; in some, complete consciousness returns within a few minutes after the administration is discontinued, while in others the stage of anæsthesia seems to be followed, without any intermission, by a period of natural sleep which may continue from ten to thirty minutes, or even longer, from which, on awakening, the patients seldom have any symptoms referable to the anæsthetic.

In the preparation of this anæsthetic, it is believed that no new chemical compound is produced; that the ingredients, not entering into a chemical union, simply form a mixture. The alcohol was added as a diluent or vehicle for the better administration of the chloroform and ethyl bromide. Although alcohol, alone, is employed by some, more especially by Dr. John E. Link, of Terre Haute, Indiana, but little of the virtues of this anæsthetic, except, perhaps, the sleep following the stage of complete anæsthesia, are attributed to the alcohol.

ADMINISTRATION.

Because of the quantity of chloroform entering into its composition, a considerable amount of atmospheric air should be inhaled along with the anæsthetic. It has been administered most frequently through an inhaler,—Dr. Jos. C. Hutchinson's, of Brooklyn, N. Y. But the same results have been obtained when simply a towel was used as an inhaler. At the present date, Nov. 30, 1883, anæsthesia has been produced in ninety-eight cases, without causing any bad effects, save vomiting in three cases. The quantity necessary to induce and sustain anæsthesia, depends, of course, upon the duration of the operation. A half drachm poured into the inhaler, or upon a towel, will generally be sufficient to induce anæsthesia, which may be sustained by the addition, from time to time, of half the former quantity.

MEDICAL PROGRESS.

THERAPEUTICS AND MATERIA MEDICA.

NITRITE OF SODIUM AS A TOXIC AGENT.—Drs. Sydney Ringer and William Murrell have given the result of their observations on this drug (*Lancet*), and conclude that as the drug now found in the market is almost pure, much greater care must be taken in its use than formerly, when it was a mixture of nitrite and nitrate of sodium, the latter predominating. In those cases in which twenty grains are stated to have been given three times a day for three months or more, the drug was undoubtedly impure, for so large a dose could not have been administered

for so long a time with impunity. If the pure nitrite of sodium were administered in the doses in which the impure drug was formerly given, the effects might be disastrous.

In describing the toxic effect, they accept the conclusions of Reichert, quoting him as follows: "The nitrites cause the arterial and venous blood to become of a uniform dark, venous color, having a distinct brownish or chocolate shade, and that this is due to the conversion of the oxyhæmoglobin into a nitrite oxyhæmoglobin, and that the nitrite blood possesses very little oxygen-absorbing power, and as a sequence, hæmic respiration is seriously interfered with and tissue metamorphosis diminished." The respiratory movements are primarily stimulated by the asphyxiated blood, and then depressed, while there is a loss of contractility in the voluntary muscles. Eighteen adults took, under their observation, ten grains of the pure nitrite of sodium in an ounce of water, with the result of producing extremely marked and disagreeable symptoms of faintness, nervousness, and pain in the head. Sixteen patients were then given five-grain doses, with the same symptoms resulting. Nausea with eructation was of frequent occurrence, and in one or two cases there was actual vomiting. Thirteen patients were given three-grain doses; only four complained of the symptoms, which were of the usual form—nausea, blue lips, headache, and giddiness.

On the Use of Lythrum Salicaria.—Dr. Campardon, in the *Bulletin Général de Thérapeutique*, extols the use of this remedy very highly in acute or chronic inflammations of the gastro-intestinal mucous membrane. In his opinion, the previous want of success in its use has been due to the way in which it has been prepared; as for example, it has been used more as a decoction than as an infusion—containing tannin and a large proportion of mucilage, as it does, a prolonged *coction* would destroy the mucilage. He cites cases of dysentery, of acute and chronic diarrhœa, particularly when dependent on an atonic condition of the intestine—or as observed in the convalescence of typhoid fever—and in the diarrhœa of children occurring in the course of dentition, where he has readily and easily checked the disorder. The drug has shown that it has not only a slightly astringent character, due to the tannin, but also that the mucilage quiets the pain, modifies the secretions, and manifests a general sedative action. The effect of the drug does not seem to be to produce the dry, painful constipation, as with bismuth, for example, but rather to restore the condition of the bowels and stools to their natural state. An excessive dose (10 to 12 grammes per day), will produce a gastric disturbance, giving the mouth a taste of the drug, an increase in the number of passages to sometimes six per day, and a diminution of the appetite. In affections of the buccal mucous membrane, as ulitis and aphthæ, the tincture of lythrum has been very serviceable. In coryza acute vaginitis with hypersecretion, chronic catarrhal vaginitis, vulvar prurigo, eczema and intertrigo, the drug, powdered and applied locally, has proved beneficial. In the acute stage of varicose ulcers, the powder of lythrum has lowered the temperature, relieved pain and hastened the formation of the cicatricial pellicule; the ulcer being washed morning and evening with a strong infusion of lythrum, and the powder renewed daily over the surface of the ulcer. Its use has been recommended in hæmoptysis, but Dr. Campardon tried it in several cases without success.

The preparations are: Infusion—30 to 40 grammes of the leaves and incised stalks to 1,000 grammes of water.

Powder—3 to 5 grammes in 24 hours, 1 gramme in a wafer as a dose. The highest dose used was 8 grammes, in a case of chronic diarrhœa of four months standing, which was relieved in less than three weeks.

Extract—2 to 4 grammes a day, in solution; children take readily a syrup made of 1 gramme of the extract to 30 grammes of syrup, given by the coffee-spoonful each hour. The extract mixed with the powder to form pills of 20 centigrammes each, is more acceptable to some persons than the powder alone.

Tincture—20 drops on a lump of sugar, four or five times a day.

For external use—3, 4 or 5 tablespoonfuls in a sufficient quantity of water to form an injection or lotion—or dissolved in the tincture of salicylic acid (1 gramme to 25 grammes); two or three tablespoonfuls in a sufficient quantity of water as an injection or lotion.

SURGERY.

Treatment of Fracture of the Patella.—At the one hundred and eleventh session of the Medical Society of London, so the *Medical Times and Gazette* tells us, Prof. Lister recorded the treatment of seven cases of fracture of the patella, which were cut down upon and wired together. The operation consists in making a longitudinal incision over the middle of the patella, cleaning out of the knee joint any blood clots which may have collected, freshening the broken surfaces of the patella, and then wiring them together. In this manner bony union is secured. The cases were of two kinds—recent, and those in which some time had elapsed since the fracture, and where there was fibrous union, with a greater or less interval between the fragments. The recent cases are, of course, the more easy and satisfactory to treat; there is no difficulty in approximating the fragments after the blood clot and effused matter have been sponged out of the joint. But, in the older cases, the fragments are often widely separated; possibly there is contraction of the quadriceps tendon, which must be divided; or the fragments of bone may be atrophied. Examples of these conditions, with the result of the operation, were exhibited to the meeting. It would be impossible to speak too highly of the results obtained; bony union of the fragments, with almost perfect movement of the joint, had resulted in every case.

Fourteen Fractures in the Same Subject; Death Four Years Later from the Effects of a Burn.—M. Fernand Giraud, under this heading,

gives us, in the *Marseille Médical*, what might, on a pinch, almost furnish material for a winter's surgical course. The case in question was a man 42 years of age, and the interest in his case consists in enumerating the injuries which he received, at various times in his life, and satisfactorily recovered from:

As a zouave in Italy he received a bayonet wound in the neck, of which he carried the scar; in the left hand a sabre cut, which required the removal of the fourth and fifth fingers. A gunshot wound fractured the condyle and epicondyle of the right arm, causing great difficulty in supination. On his discharge from the army he worked as a day laborer, when a bank of earth falling on him, he was taken to the hospital and found to be suffering from concussion of the brain, with fractures of the inferior extremity of the right radius; of the left leg, six centimeters below the knee; of the sternum, five centimeters from its superior extremity, so that at each expiration the lower extremity glided forward in front of the upper; of the third, fourth, eighth, ninth, and tenth ribs, about their middle, the cartilages of the fourth and fifth ribs being also the seat of a solution of continuity; and of the second and third lumbar vertebræ. After passing through a serious attack of pneumonia while in the hospital, the patient recovered, with a sligh deformity of the sternum (a riding up of the fractured ends) and a numbness in the right leg, he being obliged to use a cane. There was no cough aud no difficulty in respiration; the left wrist was slightly deformed, flexion and abduction of the hand being difficult. The bladder remained irritable, but there was no constipation.

His third visit to the hospital was for the treatment of a burn received in a soap factory—slight in degree, but involving a large extent of surface over the abdomen and back, resulting in a diarrhœa and death. The autopsy was most interesting in the study of the fractures of the sternum and vertebræ. The union of the sternum was so complete that an incision in the median line did not show any separation between the two fragments. The condition appeared as that of congenital deformity. The fracture of the vertebræ was one of crushing and penetration; the third lumbar vertebra had been crushed by the second, which penetrated into its tissue so that the intervertebral cartilage had disappeared, and in the midst of the solid mass formed by the two vertebræ only one line of separation was perceptible, and that on the inferior face of the superior vertebra.

MEDICINE.

A CASE OF LIGHTNING STROKE.—John Gale Mackay, M.B., gives in the *Glasgow Medical Journal* the details of a case, with a photograph, which delineates that curious arborescent appearance upon the surface of the skin which has been before described, but which is so rare, and remains usually for so short a time, that many doubt its existence.

This case was a boy of thirteen, who was marked upon the arms, and the photograph was taken four hours after the accident. The marks began to fade three hours after the accident, and in 22 hours they had entirely disappeared. The boy was stunned by the shock, and thrown down with such violence as to be severely hurt about the face and forehead. The arms were paralyzed in motion for a time, the boy being unable for some time afterwards to draw his hands out of his pockets, where they were placed at the time of the accident; there was also a sensation of numbness and cold, and the boy fancied that his arms were broken off at the elbow. Later, upon his complaining of a burning heat in the arms, they were examined and the markings noted. These markings seemed to radiate from two centers, as if the lightning had first struck the arm in two places, and had thence broken over the surrounding skin. They stretched from below the left elbow to the shoulder, and threw branches across the left chest, resembling closely images of the frouds of a fern. There were no local after effects, such as vesication or shedding of the skin.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

POISONING FROM EATING SNAILS.—Our French neighbors, since Dr. Chrestien affirmed that snails constituted a most effectual remedy against diseases of the chest, have given them most marvellous properties, and indulged their appetite for them to an increased extent. Now, we find in the *Gazette Hebdomadaire des Sciences Médicales* the record of four cases of poisoning from eating three to thirty snails. These cases all occurred in one family, as the result of one meal, and the symptoms were those of colic, vomiting and purging, with nervous prostration. It seems that snails to be suitable for eating have to undergo first a process of starvation and purging to dispose thoroughly of certain offensive and poisonous articles of food which they are fond of. So the writer, Dr P. Ducloux, declares that eight days of starvation is not long enough to effect this process, and that forty days should elapse. Where is the Society for the Prevention of Cruelty to Animals?

ANATOMY AND PHYSIOLOGY.

A CASE OF ANOMALY OF THE URETERS.—M. M. P. Souge describes in the *Marseille Mèdical* an autopsy made on a man 54 years of age where the left kidney was provided with two ureters. They were completely independent at their origin and throughout their entire course, uniting at the vesical portion and forming a single orifice at the level of the trigonum. They originated in the pelvis of the hilum—one by six calices, and the other by two calices. As they entered the walls of the bladder, they were separated by an interval of three millimeters, to unite while passing through the walls of that organ.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, DECEMBER 15, 1883.

COLLECTIVE INVESTIGATION OF DISEASE.—A few weeks since, after explaining the system of the Collective Investigation of Disease inaugurated by a committee of the British Medical Association, we invited such members of the profession in this country as were willing to engage in such work to send their names to the office of this journal and we would see that they were supplied with the proper memoranda and cards, with a view of inaugurating the work in this country in harmony with that in England. A communication was received from the committee of the British Association inviting co-operation, and presented to the recent annual meeting of the American Association in Cleveland. It was received and referred to a standing committee, already appointed, with instructions to report at the next meeting of the Association. In the meantime, a committee of the Illinois State Medical Society has caused the printing of several of the most important memoranda and cards issued by the committee of the British Association, and in addition to supplying the members of that society, it has placed at our disposal a sufficient number to supply any others who might respond to the invitation given in this journal to send in their names.

As explained in the previous editorial on this subject, the printed memoranda in relation to the diseases to be investigated, are simply intended to call the attention of the investigators to the more important topics to be noted. Only two cards on which to make returns of cases will be sent to each member of the Association whose name has been received. But as many more as may be desired will be furnished to those who return the first two properly filled accompanied by a promise to continue the work. As members of the committee to whom the subject was referred at the last meeting of the Association, we have felt at liberty to encourage these practical steps in advance, since it could be done without drawing any funds from the treasury of the national organization. And the results may enable the committee to make a more reliable report on the feasibility and value of the whole scheme than would be possible without them. All members of the Illinois State Medical Society may return their cards as soon as filled directly to Dr. J. F. Todd, Chicago, who is Secretary of the committee of the State Society. But all members of the American Medical Association, not members of this State Society, may return their cards as soon as filled to the editor of the JOURNAL, 65 Randolph St., Chicago, and at the same time indicate whether they wish more blank cards.

PHYSIOLOGY AND HYGIENE IN LITERARY COLLEGES.—In a considerable number of the best colleges and universities in our country, some attention is given to instruction in physiology and hygiene; but in none of them do these important branches of science occupy the prominent position in the curriculum of studies that they merit. We notice, with pleasure, that Center College, at Danville, Kentucky, has recently created a lectureship on Physiology and Hygiene, and filled the place by appointing Dr. Louis S. McMurtry, of that city. This is certainly an educational step in the right direction, and the selection of the right man for an important position; one preëminently fitted for the work assigned him.

CHANGES IN MEDICAL JOURNALS.—From the notices received during the last week, we judge that the ambition for publishing weekly medical journals, so strongly manifested during the last few years, has passed its climax and entered upon the stage of decline. It is only one or two years since the New York *Medical Journal*, *Gaillard's Monthly*, and the *Sanitarian*, all well established monthly medical periodicals, donned the weekly dress, making, with the *Medical Record*, four leading weekly medical journals in the city of New York. The second one named returned to the monthly form before the end of the first year; and with the last *Sanitarian*, comes the notice that it will also be returned to the form of a monthly with the beginning of the new year. We also learn that the Pittsburg *Medical Journal* has closed its career for the present, at least, and its late

able editor, Dr. Thomas Gallagher, proposes to visit the countries on the other side of the Atlantic. With the December number of the *Medical Herald*, of Louisville, its late able editor and proprietor, Dr. Dudley S. Reynolds, retires from his connection with it, having sold his interests to the publishers. It is announced that Drs. Edward Miller and W. N. Galt are to be the editors under the new arrangements. We congratulate the retiring editor, both on account of the reputation he has won and the prospect of more peace in the future, and cordially welcome his successors to a field of labor affording opportunities for much usefulness, but not altogether blooming with roses.

NOTICE.—A neat little medical periodical, called the *Polyclinic*, which does a part of the advertising for a circle of specialists in Philadelphia, recently headed its leading editorial with the announcement, "A Proof Reader Wanted!" Now, if our sprightly neighbor of the Quaker City really needs a "Proof Reader," we would kindly inform him that during the past few months we have had two or three connected with this office whose services are no longer needed, and we presume one of them might be obtained, provided fair wages were offered.

TO SUBSCRIBERS.—The first volume of this journal will be completed with the last number in this month, that all subsequent volumes may commence with the first weeks of January and July of each year. The last number of each volume will be accompanied by a title page and index. All members of the Association who pay their membership dues receive the JOURNAL for one year, thus getting two large volumes per annum. Subscribers who are not members of the Association, and consequently have less interest in preserving a complete series of volumes, can commence their subscriptions with either January or July, and have the volumes for which they subscribe complete, without taking back numbers. Consequently, now is a good time for new subscribers to make their remittances, to commence with the first of January, 1884.

NEWS ITEMS.

DISEASE ON THE TAPIS.—Under this heading, the *British Medical Journal* says: "A correspondent of the *Standard* very judiciously points out that the present eccentric fashion of furnishing drawing rooms with old Oriental rugs is both offensive and hazardous. These rugs, when they are what they are represented to be, have been used as 'passage rugs' for long periods, sometimes reaching up even a hundred years; and must, in many instances, have been knelt upon by persons affected with leprosy and other loathsome diseases. Now, the odor of sanctity is not a good disinfectant; and the danger is that these faded and frowsy floor-coverings may import amongst us some very unpleasant maladies. Old Persian rugs should either be banished from English homes, or should be baked before being introduced into them, to a degree that will add the charm of singe to that of tinge."

MALPOSITION OF A TOOTH.—The *Lancet* records a case of supposed tumor in the left nasal cavity, which, on its removal, proved to be a tooth resembling a canine tooth. It occurred in a boy of fourteen years of age, who had got his set of permanent teeth, with the incisors and canines entire on either side. There was no deformity of the jaw and no swelling or cystic formation. It was clearly a case of extra follicular development and eruption of a tooth in a wrong place. The dental follicle was transposed, and the eruption was from above downwards, the root being deeply imbedded in the side and upper part of the antrum.

PROF. EMIL DU BOIS REYMOND.—At Berlin University, on Oct. 20, was held the twenty-fifth anniversary of Prof. Reymond's occupancy of the chair of Physiology, in the presence of Ludwig, Heidenhain, Rosenthal, Bernstein, Holmgren, Leube, Gad, and Tschiniw. Prof. Heidenhain made the presentation of his bust. Prof. Rosenthal gave a jubilee volume of the *Archiv. für Physiologie*, which contained contributions from seventeen of Prof. Reymond's former pupils, all of them now well known in the various continental universities.

SOCIETY PROCEEDINGS.

THE CHICAGO MEDICAL SOCIETY.

At the meeting held on the 3d inst., at the Grand Pacific Hotel, Dr. E. L. Holmes presided, and two original papers were read.

The first was on the Treatment of Bright's Disease, presented by Dr. Charles W. Purdy, and is a very lengthy article, and concludes a series of three papers the writer has prepared and read before this Society during the past year, comprising in all at least 400 pages of manuscript.

This last one is very comprehensive, and from the wide range of therapeutical remedies used in this disease he has narrowed to a much lesser number, and determined more accurately their efficacy, which was very desirable. The following is a brief abstract:

Bearing in mind that the chief function of the kidney is the removal of nitrogenous waste from the system, it is possible to lay down a few general rules for management of the whole class of diseases ranged under the term of albuminuria, especially when they reach a point in their progress which seriously embarasses the function of the organ. First in importance, then, may be reckoned the diet of the albuminous patient. The doctrine of a bold resort to nitrogenous diet, is a very dangerous one to practice, especially so in nephritis, for the loss of albumen

by the kidneys, unless very extreme, does not cause the alarming waste that many are led to suppose, and the rapid anæmia of Bright's Disease is not alone due to waste of albumen, but to the overcharging of the blood with tissue waste, which renders that fluid unfit for healthy nourishment, and the pernicious effect of still further loading the blood with highly nitrogenized foods not only increases the evils it is intended to remedy, but it is pretty sure to lead to the most dangerous of complications, namely, that of uræmia.

In treating renal difficulties of this nature, we must bear in mind the importance of retrograde metamorphosis of tissue being present, and as the writer quoted from Fothergill, "that creatinin, tyrosin, and other early products of tissue decay, are in themselves powerful narcotic poisons, but do not pass on into uric acid and urea," hence, only small quantities of nitrogenous foods should be partaken of, with the view of repairing tissue waste, especially as the patient is not taking active exercise. In substance, then, the albumnuric patient's diet should consist of the farinaceous articles, also fish, vegetables and fruits, while meats are to be indulged in sparingly, soups are to be prohibited, and eggs excluded. Cheese must not be used. Fats may be used as freely as the condition of the stomach will permit. Milk constitutes one of the best articles of diet, and small meals, more frequently repeated than usual, is a good rule to follow. Alcohol in large quantities, especially in a concentrated form, is generally believed to be injurious; if it is given at all, it should be well diluted with Vichy or Apollinaris water in excess, whilst the lighter pale ales, or Bavarian beer, are nearly free from objectionable qualities.

The skin should receive systematic care in all forms of albuminuria, and warm flannel under-garments must be insisted upon, with no deviation from being constantly worn, and even so with the care of the feet, which must be no less rigid. The various fabrics and garments used should at all times be dry. The avoidance of exposure to vicissitudes of the weather must be particularly borne in mind. Regarding the climate, it is a fact, that in the two extremes of temperature—the arctic and torrid zones—albuminuria is rare, for reasons, well set forth, that there is the compensation of a tendency to other diseases in those climates, either of the respiratory organs or in the cutaneous system, and intestinal disorders, although amyloid disease of the kidney may sometimes arise in hot climates. The primary seat of this disease, however, is almost never in the kidneys. In America, Mexico presents many advantages; in Europe, the Mediterranean coast seems to give the best results. Rome, Cairo, and the south of France may also be particularly mentioned.

Diuretics.—Under this head of therapeutic measures, much can be said, namely: those that act by increasing the general blood-pressure in the vessels, and those that act locally on the kidney circulation and renal epithelium. Digitalis and convallaria majalis are regarded as fulfilling the first indication; mineral waters also produce this effect. Such agents as juniper, buchu, and some of the resins, if judiciously employed after the subsidence of the acute inflammatory conditions, are often productive of much benefit, also several glasses of distilled water taken daily, and the Silurian water freely drank, and Vichy, may be commended, the latter especially so in cases of gouty history. The Buffalo Lithia Springs water is also valuable in such cases.

Acute parenchymatous nephritis must be met with energetic antiphlogistic measures, and a more successful result will be attained if they be promptly resorted to. We should first secure thorough action of the skin and alimentary canal, and then limit the inflammatory progress going on in the renal tissues. The dry hot air bath is the most efficient means to fulfill the first indication. This practice is the one *par excellence* above all other baths, and the safer method. With it rapid perspiration is induced, and the bodily temperature does not become elevated beyond a degree, or at most a degree and a half. On the contrary, with the Russian bath, the temperature may increase three or five degrees, and the pulse to 150 or 160, and if any heart trouble be present the latter system of baths might prove pernicious, or if uræmia is threatened, the Russian or steam bath might induce convulsions. With the hot air bath a patient may be subjected to free diaphoresis for an hour or two with but little exhaustion. This means should be resorted to daily for an hour, in cases of acute nephritis. The perspiration thus set up may be continued by administering some warm drink. Another remedy may be employed, namely, jaborandi, or pilocarpine, as a diaphoretic. Free catharsis at first unloads the congested blood-vessels, and promotes osmosis and absorption, and should be resorted to, but the subsequent treatment may consist in giving mild aperients. All writers agree that dry cupping is highly efficacious, to be followed with the application of large warm poultices. Mustard may be added to this, and later croton oil liniment; but fly blisters or turpentine should not be used, nor juniper or squill, for they may probably add to the renal congestion, and the writer preferred above all other remedies the following agent, viz., digitalis, as being the most representative. Milk diet should be adhered to in this as heretofore, to the exclusion of meats, and the patient should remain in bed until the acute symptoms have subsided. We should be on the alert for uræmic symptoms. If this complication should appear, the hot air bath should at once be resorted to, its use prolonged until copious diaphoresis is secured, followed with a brisk purge, etc., also bromide of potash, chloral, and chloroform, and perhaps hypodermics of morphia. In this form of inflammation it may be necessary to resort to venesection. If acute chest affections supervene, the usual antiphlogistic measures employed in these inflammations should be supplemented to the foregoing remedies. If dropsy should set in as an obstinate symptom of acute nephritis, special measures for relief of this may be called for, as local erysipelas and even gangrene possibly may supervene, dependent upon that symptom. Punctures of the skin may be necessary, but to do so may endanger sloughing, etc. The trocar or aspirator may be resorted to as a temporary measure to remove fluids from the abdominal cavity.

chest, or pericardium. American hemp may be used with happy results. Given repeatedly, the diuresis arising from the use of this remedy is sometimes very copious indeed.

In chronic nephritis, substantially the same principles for treatment should be carried out as in the acute form, although the remedies should be given in smaller doses and continued systematically for a long period of time. However, one or two other favorable diuretics may be mentioned, viz., the citrate or acetate of potash in treating these cases, or to combine the compound fl. ex. buchu and pareira brava with the acetate, will add to the efficacy of the potash salt. Iron is also required for the anæmia that necessarily must be one of the results of this form of malady, and also removal to a warm climate during the winter months is advisable.

Granular degeneration, which is the most tardy and chronic in its course of all kidney diseases, may extend over a period of fifteen or twenty years, and more than is in the reach of therapeutics can be done, and greater relief afforded, by removal to a warm climate; although a case thus established of renal fibrosis may be nearly hopeless, yet the disease may be arrested and thus limited to a portion of the gland which is already involved, by removal to a temperature of 60° or 70°, with a dry atmosphere, such as Riveira and portions of Italy or Egypt possess, and are recommended as the most healthful for this class of patients. In Rome the disease is almost unknown. Cairo is also lauded, which is situate in Egypt; on this continent, Durango, in Mexico, is spoken of as a climate to be selected, as here the extremes of temperature are but 60° and 80°, and many superior advantages may be had in that country for this class of invalids that are not accessible elsewhere. The rules already laid down regarding the careful regulation of the diet must be strictly adhered to, as well as the other adjuvants for lessening nitrogenous waste in the blood, must be faithfully pursued. In all rational treatment, however systematically and judiciously devised, for renal diseases, we must have constantly in view threatening dangers. For, in Bright's Disease, cerebral apoplexy, uræmia, hypertrophy of the left heart, and other dangerous complications are constantly liable to occur. Iodide of potassium and the chloride of gold have been recommended as exercising a direct curative action on the kidney. The latter remedy has a tonic action on the stomach and uniformly improves the appetite, and may, in this manner, have a curative effect on the disease proper. For dizziness, palpitation, heaving of the chest wall, oppression, full tense pulse, etc., rest, low diet, cardiac sedatives, etc., are indicated. Iron may be given to counteract advancing anæmia, as is done in the chronic stages of nephritis.

Amyloid disease, which differs essentially from the preceding forms, in its nature requires, therefore, a different method of treatment. The causes of it are quite outside of the kidneys themselves, and our measures will be more largely directed to these outside influences. In this form of kidney disease we seldom have to contend against the dangers of uræmia, save near the close of its course. We are thus enabled to give stronger meat diet than in the other lesions. The progress of this disease, *i. e.*, lardaceous kidney, may therefore be controlled just in proportion to that extent to which we are able to control that which gives rise to it, and as dysentery, phthisis, chronic abscess, necrosis, tertiary syphilis, etc., etc., are the most prolific causes of it, we affirm they are, to say the least, not incurable.

Tuberculosis, which is, perhaps, the most fruitful source, requires such principles of treatment in accordance with mature experience to overcome it, as the scientific practitioner may employ. Surgical measures may overcome suppurative processes, and Listerism, thoroughly employed in all its minutiæ, may be found necessary to overcome this malnutrition and drain, and by this procedure we may be enabled to strikingly diminish the amyloid progress.

In this form of disease we may have a most obstinate form of diarrhœa to contend with, due to the degeneration of the small intestinal arteries, the epithelium of the mucous membrane, and the muscular coat of the villi.

Sulphate of copper in one-eighth to one-fourth gr. doses, combined with some form of an opiate, should be preferred to all the other remedies to overcome this complication, but its pathological cause may often times result in a patient's death from the intestinal flux that sets in. Visceral complications are apt to make their appearance, being a part of the same process of degeneration of blood-vessels and deposit of the peculiar amyloid material, as that which forms in the kidneys.

In the foregoing review, the principles involved in the treatment as mapped out by the author, have been studied, rather than the writing of details, which can more safely be left to the judgment of the intelligent physician.

In the discussion, Dr. R. Tilley said he doubted if uræmia was the cause of convulsions. The nervous system, however, is disturbed by the action of the kidneys, and through its influence may bring about this result. The retina undergoes great change of structure, sometimes, in kidney disease, as is seen by aid of the ophthalmoscope. A French physician has recently discovered albuminuric retinitis in one eye of a patient, while the other eye remained healthy. The trouble in the eye increased or diminished, as the albumen increased or diminished. Regarding the baths, he thinks a patient's bodily temperature will rise higher by the use of a dry hot air bath. And, regarding the diet, thinks we should pay at least as much attention to the likes and dislikes of a patient in this as to the chemical constituents of the food, whether it be of carbo-hydrates or nitrogenous.

Dr. I. N. Danforth does not have as good results from the warm baths, of any kind, as from using a steam bath made of six bricks folded in a towel and hot water poured on them, when they are under the bedclothes of a patient, while he is in bed. This crude steam bath works much better than any with which he is acquainted. In using any other form of bath, patients complain of faintness, nausea, exhaustion, etc. He thinks the paper is an excellent résume of the therapeutics of Bright's Disease. Dr. Purdy has no

doubts about the uræmia being the cause of convulsions in Bright's Disease, and also that uræmia produces puerperal convulsions. The pathology of the kidneys of a woman having puerperal convulsions from uræmia is the same as in acute nephritis, and the convulsions are similar. The dry hot air baths are endorsed by high authorities. By this means the heat is conducted more readily from the body. The diet is of the utmost importance, especially regarding meat in nephritis and granular atrophy, in which it is positively pernicious, although some resort to it boldly. But the food that consists mainly of carbo-hydrates should be preferred.

Dr. G. C. Paoli—Few of us can diagnose true kidney disease early. It takes months to do it. Cirrhosis we cannot diagnose at first. I do not believe in the use of pilocarpine. Keep the bowels open freely and with good, wholesome food, is about all that can be done with this class of patients, as we ordinarily see them here.

This was followed by Dr. F. C. Hotz, who read a paper on "The Treatment of Granulated Eye-Lids with Jequirity," giving the result of his experience on sixty-five eyes, by using an infusion of the jequirity seed of the Brazilian shrub. The remedy is popularly known as sea bean, and was introduced by Dr. Wicker, of Paris, as a valuable remedy for trachonia. The infusion is prepared by macerating the pulverized bean for twenty-four hours, and has a very peculiar effect upon the conjunctiva, producing a sort of croupous inflammation, which runs its course within one week, without doing the slightest harm to the conjunctiva or cornea. And when the infusion is applied to granulated lids, the production of the jequirity ophthalmia that ensues is usually followed by the most marvelous improvement in the condition of the conjunctiva and cornea. The doctor summarized his experience in the following conclusions:

(1.) Jequirity is the best known remedy for chronic granular conjunctivitis.

(2.) It is the most efficient remedy for clearing a trachomatous pannus, and in inveterate forms of pannus it is preferable to the operation of peritomy, as well as inoculation of blenorrhœal virus, because it works quicker than the operation, and is safer than the inoculation.

(3.) It has no injurious effect upon the eyes, and can be used with perfect safety, even where the cornea is ulcerated.

(4.) It should not be used while the cornea and conjunctiva are actually inflamed.

(5.) It does not benefit those cases of chronic conjunctivitis in which the symptoms of catarrh (succulence of the retrotarsal folds with increased secretion, etc.), predominate over those of trachoma.

(6 and lastly.) The more violent the attack of the jequirity ophthalmia is, the quicker will be the cure of the granulated lids, and the speedier will the clearing of the cornea be produced.

DISCUSSION.

Dr. R. Tilley, said jequirity has been used all over the world for treatment of granular eyelids, and he thought, by adding a small quantity of hyd. chl. cor. to the infusion, that it would increase the efficacy of the remedy in curing this class of patients.

Dr. B. Bettman said the active principle of the bean is a crystalline substance, and an infusion of it is known to produce bacterial ophthalmia, *i. e.*, a bacillus is formed, or, I may say, a bacteria jequirity is produced on the conjunctiva, this, I think, overcomes the other variety of the inflammation, or, I may say, a vegetable ferment is produced—and the experiments thus far are not disproven. Dr. J. E. Colburn stated if the bean is macerated in tepid water, for fifteen minutes, we will get the full effects of jequirity inflammation, if applied to granular lids. It will be produced in from twelve to fourteen hours, and in some cases in only 6 hours. He cited a case of pannus, where the patient had been almost entirely blind for three years, and by applying the infusion the patient at present was able to read newspaper type. The case was a gentleman, who had pannus this length of time, although it was not very dense. The dry bean, applied to the conjunctiva, does not produce so violent an inflammation. Dr. Hotz, in closing, said he had nothing special to add, beyond that which he reported in the paper. He simply had presented clinical facts on the efficacy of the jequirity bean, which he now showed in the small phial, and of which all could see for themselves its size, form, etc.

L. H. M.

SOCIETY TRANSACTIONS.

TRANSACTIONS OF THE TEXAS STATE MEDICAL ASSOCIATION—FIFTEENTH ANNUAL SESSION HELD AT TYLER, TEXAS, APRIL 24, 25, 26 and 27, 1883.

This volume of 315 pages, 12mo, is full of interesting practical material, from a fair proportion of 282 members. The reports on progress in the different departments of medicine are full summaries of the practice of to-day. Dr. Sam. R. Burroughs reports a case of malarial hæmaturia, where the renal capillaries responded promptly to the action of ergot, and where the intestinal mucous membrane took on a vicarious action, resulting in uncontrollable diarrhœa. Dr. Wm. F. Starley reports four cases illustrating the use of chromic acid in uterine hæmorrhage. Dr. J. J. Burroughs reports a case of removal of a living child from the uterus, by Cæsarean section, four minutes after the death of the mother. Dr. J. D. Osborne reports a case of amputation below the knee to remove the effects of an ulcerated leg of forty-five years standing, which resulted in a fracture of diseased bone; and also a case of intussusception of the bowels with stercoraceous vomiting, in a boy five years of age, which was relieved by administering forty grains of tartaric acid dissolved in six ounces of water, and followed by the same quantity of bicarbonate of soda, as enemata. This was given twice, and the resulting formation of gas distended the bowels and caused fœcal evacuations. Dr. T. H. Nott reports a case of tracheotomy for the removal of a grain of corn, which was cut in two by the incision made, and by acting as a valve pushed up with each expiration, and held in position by the swollen folds

of mucous membrane from behind it, necessitated a second incision low down in the trachea before it could be extracted. Dr. Will. B. Davis reports six cases in detail, and refers to some eighteen more, of internal hæmorrhoids relieved by the subcutaneous injection of carbolic acid. He uses the chemically pure acid, and prefers it to the glycerole dilutions, as acting quicker and more effectually, and as passing through the needle more readily. Drs. Beale and Adams report an interesting case of sponge grafting. Dr. Arthur S. Wolf reports two cases of hæmorrhoidal tumors of the urethra treated by the electro-cautery, and discusses the subject at some length. The details of six successful cases of ovariotomy are reported; one by Dr. J. J. Burroughs, one by Dr. S. F. Starley, and four by Dr. T. D. Wooten. Dr. J. B. C. Renfro reports ten cases of uterine polypi. Dr. M. J. Birdsny reports a curious case where absence of the uterus was diagnosticated in a negro woman twenty-two years of age. The vagina was a closed pouch an inch deep, capable of expansion by pressure to two and a half inches. She was very amorous, and, at her urgent request, an attempt was made to give her a vagina of sufficient depth and capacity. The operation resulted in pelvic cellulitis, with a profuse discharge of pus continuing up to the time of making the report, some two months after the operation. Dr. Hilliary Ryan reports a case of vesico-vaginal fistula which was successfully operated on. Drs. Geo. P. Hall and R. H. Chilton give interesting practical reports, respectively, on the conditions of the eye as occasioned by diseases of remote organs, as the uterus, and upon the cataract operation. There are other interesting papers in this volume which we have not referred to for want of space.

TRANSACTIONS OF THE MAINE MEDICAL ASSOCIATION, VOL. VIII, PART I, 1883; 8vo., 190 pp.—The address of Dr. Geo. E. Brickett, as President, shows this Association to have been organized in 1853 by twenty-seven physicians. The list of members show 240 names at present on the active list. Both the President and Dr. M. C. Wedgwood, in the annual address, dwell on the importance of supporting the Code of Ethics of the American Medical Association, and condemn all recognition of "pathies" and "isms" in medicine. Dr. A. K. Meserve discusses Acute Inflammation of the Middle Ear. Dr. E. Eugene Holt discusses Diseases of the Mastoid. Dr. J. G. Pierce considers the subject of Synovitis. Dr. H. N. Small has a paper on Extra-Uterine Pregnancy, and Dr. A. H. Burbank has one on the Induction of Premature Labor. Dr. S. C. Gordon gives the Results of Treatment of Injuries Occurring at Parturition.

Dr. Stanley P. Warren gives the description of a case of Rudimentary Uterus and Vagina, and a case of Cyst of Gartner's Canal. The latter is interesting, from its rarity, and from the recent references which have been made in medical literature to inflammations of this canal. The doctor gives also a short reference to Gartner. Dr. Benjamin F. Sturgis reports a case of Chronic Abscess of the Tibia. Dr. J. A. Spalding gives a very instructive account, with comments, of a malpractice suit in a case of injury to the eye.

Dr. S. C. Gordon, in his report as delegate to the American Medical Association, speaking of the JOURNAL, considered that flattering encouragement was given to it, but hopes that arrangements may be made for more elaborate reports from the Sections where the most interesting discussions are held. An expenditure of a small sum, in his estimation, would furnish stenographers during the session. The biographical sketches which follow, refer to Drs. William Warren Greene, J. P. Grant, Daniel Mountfort Tolford, Roland Curtis, Wm. H. Brown, Daniel F. Ellis, Rotheus E. Paine, Atwood Crosby, and William Sweat, and an extended and very interesting sketch of that eccentric character, Dr. Alexander Ramsay, who died some fifty years ago. Dr. G. P. Bradley, Passed Assistant Surgeon U. S. N., who acts here as his biographer, seems to be provided with unusual facilities for the purpose through his uncle, Dr. Bradley, of Fryeburg, who was a pupil of Ramsay, and possesses the remains of his fine cabinet of preparations and other materials.

BOOK REVIEWS.

ANNUAL REPORT OF THE SUPERVISING SURGEON-GENERAL OF THE MARINE HOSPITAL SERVICE OF THE UNITED STATES, FOR THE FISCAL YEAR 1883. 8vo., 406 pp.

This report is filled with interesting matter. Surgeon-General Hamilton sums up the amount of relief furnished to 40,195 patients, of whom 13,356 were treated in the hospitals, and 26,839 at the dispensaries. The receipts from all sources were $426,620,35, and the expenditures $469,966,21. The necessity for medical relief to the inhabitants of Alaska, and protection from the devastations of syphilis and small-pox is strongly set forth. Reports upon the various hospital buildings and grounds are given at length, with diagrams showing their modes of construction. The question of national quarantines is discussed at some length. The activity and unceasing vigilance of the State Board of Health of Louisiana is referred to in so many words, and "their co-operation made comparatively easy work of what would otherwise have been a task of extreme difficulty." To obtain information from foreign ports, sanitary inspectors have been stationed at Havana and Vera Cruz to give notification of the approach of vessels from those ports at which yellow fever was prevailing; and, in view of the threatened introduction of cholera into the United States by means of shipment of rags, etc., from Egypt, by way of England, sanitary inspectors have been appointed at London and Liverpool, to furnish information of the departure of vessels liable to carry infected passengers or goods. The State Department has actively co-operated in this work, and the consuls have furnished accurate and trustworthy reports from foreign stations. It is recommended that a treaty be negotiated whereby the continuance of commercial relations with Vera Cruz and Havana, as an instance, would

depend upon the cleanliness and sanitary condition of the ports. This is meant to apply particularly to the Governments of Mexico and Spain, as controlling cities bordering on the Gulf, and to the Government of Brazil. The opinion is given that, under existing law, the duty of the Government ends with the maritime quarantine, and the question of local municipal sanitation may, with propriety, be left to the States.

Some eight tables of statistics of the exhibit of operations of the service, of relief districts, a summary of physical examinations of seamen, of diseases and injuries treated, and of causes of mortality, take up some 53 pages. The selected cases from hospital practice include: Manifestations of syphilis among negroes, by Passed Assistant Surgeon, Henry R. Carter, in which the comparative absence of cutaneous eruptions and of mucous patches is marked, and the conclusion reached that syphilis pursues a mild course in the negro race, milder than in the white. Acting Assistant Surgeon A. C. Hamlin reports an interesting case of molluscum, and Acting Assistant Surgeon Geo. H. Stone reports three cases resembling yellow fever occurring at Savannah. Surgeon C. D. Fessenden and Assistant Surgeon C. T. Peckham report cases of popliteal aneurism—the first relieved by compression, the second by ligation of the femoral artery. Surgeon George Purviance reports a case of fracture of the frontal nasal, lachrymal, malar and superior maxillary bones. Surgeon James M. Gassaway reports a case, with illustrations, of fracture of base and vault of skull, resulting in abscess and hæmorrhage and terminating by recovery. Surgeon H. W. Austin gives a case of excision of the shoulder joint for caries, and one of excision of the head and two inches of the shaft of the humerus, followed later by excision of the entire scapula for caries.

He also reports a case of gunshot wound of the eye. Other cases follow, viz.: Osteotomy for vicious union of fractured tibia, by Assistant Surgeon C. T. Peckham; loose cartilage in knee joint, by Assistant Surgeon D. A. Carmichael; contusion of perinæum with laceration of the urethra; Perineal section, by Surgeon Henry W. Sawtelle. abscess of the liver, relieved by aspiration, by Assistant Surgeon John A. Benson, and empyema, relieved by aspiration, by Acting Assistant Surgeon Geo. H. Stone.

The reports of fatal cases with autopsies are very full, and include, among others, reference, in a case of apoplexy, to a pedunculated polycystic body, of an elongated and ovoid shape, about two inches in length, and free from any attachment, except to the choroid plexus in each lateral ventricle, lying loose on the floor, and connected with one end was a long stem (pedicle) which sprang from within a large capillary, given off from the choroid plexus. Microscopic examination determined the cysts to be echinococci. In another case of a man fifty years of age—no diagnosis, suffering from general dropsy effusions into peritoneum and pleura, valvular disease of heart, only one kidney and ureter was found, the right kidney, which was one-half longer than normal. A case of rupture of the heart is recorded where death occurred after symptoms of pneumonia, with acute rheumatism and pericarditis. The heart was in a condition of fatty degeneration, and the rupture, twelve millimeters or more in length, was found in the left ventricle, on its anterior aspect, about twelve millimeters above the apex.

The yellow-fever epidemic of 1882, in the United States and a part of Mexico, is dealt with fully in an appendix made up of the reports of Surgeon Robt. D. Murray, Acting Assistant Surgeons Towsey, Burk, Finney, Fisher and White, and Drs. Lehman and Herron, accompanied by three maps, and giving also a report on the sanitary condition of Vera Cruz, by Assistant Surgeon John Guiteras. The protection afforded by the service, as detailed here, is referred to by O. M. Roberts, Governor of Texas, as a perfect success.

REPORT OF THE COMMISSIONER OF EDUCATION, FOR THE YEAR 1881. 8vo., cclxxvii., 840 pp.

This interesting and valuable report is poorly printed on inferior paper. It is for the most part statistical in its details, but contains a large amount of matter that is of interest to the profession. We note that there are two Schools of Medicine given as for the education of the colored race. One, the Meharry Medical Department of Central Tennessee College, at Nashville, has eight instructors and thirty-five students; the other, the Medical Department of Howard University, at Washington, D. C., has ten instructors and eighty-one students. There are forty-eight scientific (so-called) schools in the United States, employing a corps of instructors amounting to 582 in number. Of the schools of medicine, dentistry and pharmacy, the statistics for 1881 read as follows:

Medical and Surgical.—Number of schools, 76; of instructors, 1,213; of students, 19,250; of graduates at the commencement of 1881, 3,299. Volumes in library 40,757. Value of grounds, buildings and apparatus, $2,208,470. Receipts for the last year from tuition and other fees, $375,493.

Eclectic.—Number of schools, 8; of instructors, 80; of students, 882; of graduates, 288. Library volumes, 2,216. Value of grounds, etc., $230,500. Receipts $39,760.

Homœpathic—Schools, 12; instructors, 173; students, 1,285; graduates, 442; library, 4,195. Value of grounds, etc., $244,000. Receipts, $39,244.

Dental.—Schools, 16; instructors, 215; students, 703; graduates, 285; library, 6,375. Value of grounds, etc., $151,500. Receipts, $84,338.

Pharmaceutical.—Schools, 14; ;instructors, 65; students, 1,416; graduates, 377; library, 7,695. Value of grounds, etc., $79,200. Receipts, $30,830.

The summary of statistics of training schools for nurses gives as the number of schools, 17; instructors, 84; pupils, 414; graduates, in 1881, 133.

With these tables is given a running commentary, which is instructive and suggestive. Under the head of medical schools, preparatory courses, entrance examinations, undergraduate courses, character of medical instruction and the progress in medical education are all discussed. Education in foreign countries and abstracts of the official reports

of the school officers of States, Territories and cities, with statistical tables, for the bulk of the volume. Table xxiv, as an example, gives all the educational and historical publications for 1881, embracing name of book and author, name of publisher, place of publication, size of book, number of pages and price. Table xxv gives improvements in school furniture, apparatus, ventilation, etc., patented in the United States in the year 1881, the whole forming a valuable book of reference for the purposes for which it is intended.

UNITED STATES CONSULAR REPORTS.—REPORTS FROM THE CONSULS OF THE UNITED STATES ON THE COMMERCE, MANUFACTURES, ETC., OF THEIR CONSULAR DISTRICTS. No. 33. September, 1883. 8vo. pp. 415–614.

There is one report in this number which attracts medical attention, but it is rather curiously put. It is headed "Yellow Fever: Scientific Experiments Made at Rio Janeiro, Showing the Transmission of the Disease by Contagion," and is forwarded by Minister Andrews. The report reads "on the 14th we took" etc., but throughout the report there is no key as to who "we" might be. St. Menezes Doria, Dr. Domingos Freire, and Dr. Arango Goes are all mentioned incidentally. In substance, laboratory experiments are given, where some grammes of blood were taken from the heart of a person dying of yellow fever, in which blood the microscope revealed the presence of cryptococci, in different phases of full development. One gramme of this blood was injected into the vein of a rabbit, which died in fifteen minutes with tetanic convulsions. This rabbit's blood, one gramme, was similarly injected hypodermically in a Guinea-pig, which died at the end of some hours. A gramme from the blood of the third subject was injected under the skin of another Guinea-pig. It died within a little time, the blood of all these subjects showing an infinity of cryptococci, and post-mortem examination revealed the anatomico-pathological lesions which usually characterize cases of yellow fever in man. Dr. Domingos Freire is quoted as having discovered and isolated an alkaloid, extracted from black vomit, in which it exists in the state of a salt, considering it a product of a secretion or excretion of the microbii. It is a liquid, of an acid, aromatic smell, oily, forms an opalescent emulsion with water, and is soluble in alcohol and ether; giving out abundant ammoniacal vapors when heated with potash. Dr. Freire also ascertains, by direct experiment, by cultivating cryptococcus in gelatine within a globe, that the color of black vomit is not due to altered blood, but to the cryptococcus, and he was thus enabled to obtain an artificial black vomit. The earth was taken from the grave of a man deceased the year before, which also produced artificial black vomit. A Guinea-pig being shut up in a confined space with some of this earth, died in five days, and its blood, which was previously examined and found to be pure, was crammed with the cryptococcus, in various stages of evolution. The urine was albuminous, and the brain and intestines were yellow with the peculiar pigment of the cryptococcus. Dr. Aranzo Goes is also mentioned as having cultivated a fungus from the blood of the liver of a yellow fever patient upon a slice of bread, with which he succeeded in communicating yellow fever to various fowls, Guinea pigs, and a monkey, by inoculation, injections, and introduction into the stomach.

FOREIGN CORRESPONDENCE.

[For the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

LONDON, NOVEMBER, 1883.

By the somewhat sudden death of Sir William Siemens, the scientific world loses one of its brightest luminaries. He was by birth a German, and learned engineering at the factory of Count Stolberg, but in 1843 he came to England. Since then, his fertile brain produced invention after invention, each fresh outcome of his inventive power having some practical bearing on the arts. He received the degree of D.C.L. from Oxford University in 1869; was elected a Fellow of the Royal Society in 1862. His theory of the conservation of solar energy, published last year, won the attention of men of science all over the world.

At the last meeting of the Pathological Society, Mr. Sutton, in conjunction with Dr. H. Gibbes, read a paper on "Tuberculosis in Birds." He said his attention was first attracted to the disease by a farmer in the north of Middlesex, in the spring of 1879, who complained that his stock of poultry was in a fair way of becoming annihilated. Ducks and geese were not affected. After spending more than two years in investigating the matter, and examining from all sources more than 1,000 birds of various species, he discovered invariably, in the diseased organs, a bacillus undistinguishable from that believed by Koch to be distinctive of tuberculosis, and that although in grosser anatomical features, the lesions differ from those of human tuberculosis, yet, histologically, the resemblance is close. Evidence was also obtained of the transmission of the disease to animals fed on the tuberculous tissues of the bird. It is the intention of the Society to initiate a debate upon tubercle, especially with regard to its infective qualities.

A young girl died the other day from eating rather freely some preserved salmon from a tin, a brother who had also partaken of the fish was taken ill after having taken it. The medical evidence showed that death had been caused by the salmon having become poisoned through the tin of the case having dissolved off the iron, and the salmon becoming decomposed by the nitrate of tin that was formed.

An interesting case of successful Cæsarean section in a dwarf has taken place in a provincial town. The patient, a woman aged 48, only four feet in height, ceased growing at the age of eight years. The antero-posterior diameter of the pelvis was only three-fourths of an inch. The operation was performed in a small room of a cottage situated in a narrow court, there being barely standing place for four medical men in the apartment. The weather was so sultry that the window had to be kept open. There were four children down with measles in the

only available room for the use of the family—eight in number—the narrow, unlighted stairs communicating with the dwarf's room above. The operation was performed without antiseptic precautions; no chloroform was used, the neighborhood of the linea-alba being rendered insensitive by means of the ether-spray. The wound was closed by silver sutures, and the patient kept under the influence of opium. For the first few days the symptoms were bad, and although the only nursing received was from a neighbor, who ran in at intervals, within a month the woman was quite well and able to go out. The fœtus weighed seven pounds, and had been dead about seven days. Taking into consideration all the surroundings, the case may be looked upon as unique.

A case is reported of a cowman becoming inoculated in the mouth with virus from a cow suffering from foot and mouth disease. His mouth has been one mass of sores, which apparently attacked the whole of the intestinal mucous tract, and ulcers were appearing on the legs and feet. This is the first well authenticated case occuring in England of the poison being conveyed from the animal to a human being in so marked a form.

The proposal to establish a Marine Zoölogical Station is still being energetically carried on, and it is suggested that some of the surplus funds of the British Fisheries Exhibition should be available for its foundation. Professor Ray Lankester has pointed out that England stands almost alone among the European States in not having a well-equipped marine zoölogical laboratory. It is to be hoped, as more than one good site has been offered, that such an institution may soon become a "*fait accompli*."

A Preparatory School of Medicine has, this autumn, been established at the West London Hospital, at Hammersmith. One of its chief objects is to give intending medical students an early insight into their proposed profession, so they may be able to determine, without needless loss of time or money, if the practice and science of medicine and surgery is compatible with their aspirations. G. O. M.

NECROLOGY.

Hawley, George Benjamin, M.D., was born in Bridgeport, Conn., Feb. 13th, 1812; died at Hartford, Conn, April 18th, 1883.

Dr. Hawley's parents removed to Watertown, Conn., while the subject of this sketch was very young, and there he passed his boyhood days, attending the schools in the neighborhood, and acquiring the strength and vigor of body which sustained him in the arduous labors of after life. He afterwards attended a school in Goshen, Conn., where he was prepared for Yale College, which he entered in 1829, graduating in the class of 1833. He immediately commenced the study of medicine with Dr. Pierson, of Windsor, Conn. He attended the lectures at the Medidal Department of Yale College in 1833–34 and 1835.

Receiving his degree, he commenced practice at Charlton, Mass., remaining, however, but a short time, having received and accepted an invitation from Dr. Silas Fuller, the Superintendent of the Retreat for the Insane, at Hartford, Conn., to become his assistant. Four years after he married Dr. Fuller's daughter, Zerviah C., who died in 1847, leaving one son, George F. Hawley, M.D., who is now in practice in Hartford.

In 1848 Dr. Hawley was again married to Miss Sarah C. Boardman, who is still living.

Dr. Hawley was a man of very marked character. His perceptive faculties were exceedingly prominent. His judgments were rapid, but usually correct. He seemed to comprehend a case of disease at a glance almost by intuition. He was the possessor of exhaustless physical power. These faculties enabled him to perform a vast amount of labor in a given time. His perseverance was unlimited, and difficulties and obstacles only stimulated him to greater effort.

Like General Grant, he did not seem to know when he was beaten, and often won a victory out of an apparent defeat. With such a temperament his treatment of disease would naturally be "heroic." He believed in medicine, and in its power to cure, and he attacked disease with all the ardor of his nature.

In 1854, Dr. Hawley became interested in the Hartford Hospital, and it is largely due to him that this charity is to-day established on so firm a foundation. From its beginning till his death this institution occupied a large share of his time and thoughts, and his last work, while confined to his room, was a revision of the rules for its government.

A few years since he conceived the idea of erecting a home for aged and infirm people in indigent circumstances.

He immediately set himself to the task, with all his usual earnestness. He was not spared to see the completion of his work, but he accomplished much, and never lost faith to the last in the success of his undertaking.

A man of Dr. Hawley's character could not but incur the enmity of some, but those who knew him the most thoroughly never questioned his honesty, integrity, and true benevolence.

Charles H. Pinney, M.D., of Conn.

Hersom, Nahum Alvah, M.D., of Portland, Me., was born in Lebanon, in that State, August 7, 1835, and died in Dublin, Ireland, May 1, 1881. His early life was spent in active labor upon his father's farm. Fond of study, the limited duration of the district school was supplemented by attendance upon the schools of adjoining districts In August, 1852, he began attendance at Parsonsfueld Academy, and later at the academy at West Lebanon. Working upon the farm summers, teaching very successfully winters, attending the academy spring and fall, he fitted for college. That he was not able to take a college course was to him a keen regret, which never lessened. He first studied medicine with Dr. John S. Parker, of Lebanon, and later with Dr. David T. Parker, Farmington, N. H. Attended his first course of lectures at Brunswick, Me.; the second at the University of Pennsylvania, at Philadelphia, where he graduated March, 1861. Settling in Sanford, Me.,

he was well established in practice, when he entered the army as Assistant Surgeon 20th Regiment Maine Volunteers, August, 1862. In December, 1862, he was taken prisoner at Fredericksburg, Va., but was soon released. In March, 1863, he was promoted to be full Surgeon 17th Regiment Maine Volunteers, where he remained till April, 1864, when he was given the charge of the field hospital of the Third Division, Second Army Corps. As Dr. Hersom was the youngest surgeon in the division, the appointment was a great surprise to himself. He was selected for the responsible position on account of his recognized ability and character.

How faithfully and well he performed his duties while in the army, the love and esteem in which he was always held by officers and men best testify. His life there, as always, was that of the ideal man—pure, noble, manly, Christian.

In August, 1865, Dr. Hersom settled in Farmington, N. H., and the November following married Jennie Lord, daughter of Samuel Lord, of Spring Vale, Me. At the end of two years, his health being greatly undermined by his army life and an extensive and laborious country practice, he was obliged to give up business, and the next five years were spent in efforts to regain his health. He was not able to resume active practice til the fall of 1872, when he came to Portland. From this time he devoted himself unremittingly to his profession, in which he was very happy and in which he was eminently successful, becoming, notwithstanding his long loss of time and a constitution permanently impaired, a leading practitioner in the State. Feeling much worn by the labors of a very extensive practice, Dr. Hersom left Portland April 11, 1881, for a few months stay abroad, landing at Queenstown, April 22; while on the way to Dublin, May 23, he was attacked by peritonitis, which ended fatally —— 1, 1881. He received the best medical attendance of Dublin, and unremitting care and attention from Dr. E. E. Holt, of this city, who accompanied him, assisted by Dr. D. Webster, of New York, but without avail. He realized his condition, leaving messages for his wife and little girl, and expressed willingness to go. Dr. Hersom's religious faith was deep and earnest, shown more by his life than by professions. He was a member of State Street Church. He prossessed rare qualifications for a physician, keen diagnosis, with an almost intuitive grasp of the right remedy. His was no routine practice; each case was a separate study. He never put his own ease or interest before that of a patient. Very unassuming, sympathetic and sincere, his patients became his firm friends to an unusual degree. His loyalty to friends was a marked trait. He could forgive and forget an injury, but he never forgot a friend or favor. While his many rare qualities only make his loss the greater, his friends have a precious legacy in the memory of his life. Dr. Hersom was a member of the city, county and State Medical Societies, and the American Medical Association, which he joined in 1880.

E. E. HOLT, M.D.

MISCELLANEOUS.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY, DURING THE WEEK ENDING DECEMBER 8, 1883.

Medical Inspector D. Kindleberger, ordered to the U. S. S. Hartford, Pacific Station, per steamer of the 10th inst.

Medical Director A. L. Gihon, detached from duty as member of Board of Inspection and Survey, on the 15th inst., and placed on waiting orders.

Medical Director George Peck, ordered to report on the 15th inst., as member of the Board of Inspection and Survey.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 30, 1883, TO DECEMBER 7, 1883.

Carter W. F., Captain and Assistant Surgeon; relieved from duty at Washington Barracks, D. C, to take effect at the expiration of his present leave of absence, and assigned to duty at Little Rock Barracks, Arkansas. (Par. 4, S. O. 224, Department of the East, Nov. 30, 1883.)

Brown, Paul R., Captain and Assistant Surgeon; assigned to duty in the Department of Arizona. (Par 4, S. O 273, A. G. O., Nov. 28, 1883.)

Richard, Charles, First Lieutenant and Assistant Surgeon: assigned to duty at Jackson Barracks, New Orleans, La. (Par. 2, S. O. 224. Department of the East, Nov. 30, 1883.)

Shufeldt, R W., Captain and Assistant Surgeon; now on sick leave, relieved from duty at Jackson Barracks, New Orleans, La. (Par. 3, S. O. 224, Department of the East, Nov. 30, 1883.)

NEW BOOKS.

Beal, L. S. One Hundred Urinary Deposits. Second edition. Plates. 5s. Churchill, London.

Bradshaw, B. Dictionary of Mineral Waters, Climatic Health Resorts, Sea Baths, and Hydropathic Establishments. Second edition. 2s. 6d. Trübner, London.

Hill, B. The Essentials of Bandaging, With Directions for Managing Fractures and Dislocations Fifth edition. 5s. Lewis, London.

Hospital Management. Being the authorized report of a conference on the administration of hospitals, held under the auspices and management of the Social Science Association, on the 3d and 4th of July, 1883. 2s. 6d. Paul, London.

Husband, H. A. Sanitary Law; A Digest of the Sanitary Acts of England and Scotland. 3s. 6d. Simpkin, London.

Mushet, W. Boyd. Cholera: Its Ætiology, Contagiousness, and Treatment. 2s Churchill, London.

Ralfe, C. H. Clinical Chemistry; An Account of the Analysis of Blood, Urine, Morbid Products, etc. Sixteen engravings. 5s. Cassell, London.

Semple, C. E. A. Children's Diseases: Their History and Treatment 7s. 6d. Baillière, London.

Slagg, C. Sanitary Work in the Smaller Towns and in Villages. Second edition. 3s. Lockwood, London.

Treves, F Surgical Applied Anatomy. Sixty-one engravings. 7s. 6d. Cassell, London.

Wise, A. T. Tucker. Wiesen as an Alpine Resort in Early Phthisis. With instructions on clothing, diet, and exercise in the Swiss Alps during winter. 3s 6d. Baillière, London.

Woodhead, G. S. Practical Pathology. One hundred and thirty-six colored plates. 24s. Simpkin, London.

Brown, D. B. Surgical Experiences in the Zulu and Transvaal Wars, 1879 and 1881. 8vo. 6s. Simpkin, London.

Carter A. H. Elements of Practical Medicine. Second edition. 9s. Lewis, London.

James, Prosser. Vichy and its Therapeutical Resources. Fifth edition. 2s. 6d. Baillière, London.

Kirk, J. Papers on Health. 8 vols., 12mo. 2s. each. Hamilton, London.

Milton, J. S. The Hygiene of the Skin. Second edition. 1s. Chatto, London.

Snow, H. S. Clinical Notes on Cancer; Its Ætiology and Treatment. With Special Reference to the Heredity Fallacy and to the Neurotic Origin of Most Cases of Alveola Carcinoma. 3s. 6d. Churchill, London.

Strange, W The Seven Sources of Health. A Manual of Personal Hygiene. 2s. 6d. Renshaw, London.

Watts, H A Manual of Chemistry. Vol. I. Physical and Inorganic Chemistry. 9s. Churchill, London.

Buckham, T. R. Insanity Considered in Its Medico-Legal Relations $2.00. Lippincott & Co.

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. I. CHICAGO, DECEMBER 22, 1883. NO. 24.

ORIGINAL ARTICLES.

IMMEDIATE PERINEORRHAPHY. TWO FORMS OF RUPTURE; THE SPECIAL TREATMENT OF EACH; CERTAIN DETAILS IMPORTANT TO SUCCESS.

BY E. C. DUDLEY, M.D., PROFESSOR OF DISEASES OF WOMEN, CHICAGO MEDICAL COLLEGE.

[Read before the Obstetric Section of the American Medical Association, June, 1883.]

During the past few years I have examined such gynæcological cases as came under my observation for evidence of previous perineal rupture, and have specially observed, in those cases in which the immediate suture had been applied, whether the union had been such as to give the patient a solid, normal, triangular perineal body, capable of fulfilling all its functions. These observations were undertaken not for the purpose of publication, but as the basis for an individual judgment, and this is my excuse for the absence of accurately recorded statistics, but the conclusions which have forced themselves upon me are so adverse to what had been anticipated, and seem so important, that I venture to place them before you, as follows:

Upon ocular examination of the cutaneous side of the perineal triangle, this was, in the majority of cases, found united, but one index finger in the rectum and the other in the vagina showed an almost constant failure of union in the deeper muscular and connective tissues of the organ, with the resulting tendency to descent of the uterus by traction from the prolapsing anterior and posterior vaginal walls. It may be that the difference of opinion among the profession on the value of the primary operation of perineorrhaphy partly arises from the failure of many to examine with reference to the presence or absence of union in the deeper portions of the perineal body, and it would indeed seem that an important advance will be made when the whole profession comes to the practical appreciation and application of a certain truth, which with many appears to have little more than theoretical recognition. It is this: the cutaneous and subcutaneous structures constitute relatively the least important part of the organ, and that when rupture occurs, union of these structures, *i. e.*, the production of the so-called thin perinæum, is of little consequence, because the deeper and more important structures have failed to unite. Assuming that the cases which I have examined may fairly be considered as representatives of their class, it follows that the immediate suture, as ordinarily applied, often at least, fails to fulfill its indication, and that it must either be made more efficient, or we must postpone all operative procedure until after convalescence, and then rely on the secondary operation. But, in such postponement, we fail to meet what many would regard the most vital and immediate indication for perineorrhaphy, *i. e.*, danger of sepsis by absorption through the torn surfaces, which, from their location and surrounding conditions, are peculiarly favorable to the development of wound disease.

But if the sutures fail to produce complete union of the torn surfaces, it is evident that they also fail to protect against sepsis. Indeed, they rather favor its development by producing additional irritation, and thus acting as a cause of wound disease. Moreover, the union of the cutaneous surfaces by closing the superficial part of the perinæum only, forms a pouch of the deeper torn surfaces, where the discharges may accumulate, and through which they may be readily absorbed. To prevent this, various faults in the primary operation should be avoided, and among them, the most important are certain defective methods of passing the sutures. I have myself seen the operation performed a number of times when only superficial sutures were used. Evidently such a procedure would not only be liable to fail of full union, but would also favor the formation of the already mentioned pouch, where the discharges from the uterus could accumulate and become septic. But it is possible that an equally effective source of error is in the failure to distinguish between the different varieties of rupture, and therefore to give to each case its proper method of suture.

The commonly accepted form of perineal rupture causes the perineal body to be separated into two parts, the one retracting to one side and the other to the opposite side of the vaginal outlet. In this form of rupture, we have two plane, raw surfaces of triangular shape to be approximated. The method of operation is almost self-evident. It requires the sutures to be passed transversely from one side of the raw surfaces to the opposite side, commencing at the vaginal extremity of the rent, and continuing them one after the other, at intervals of about one-fourth inch throughout its whole extent, the last suture being nearest to the anus. When the operation is complete, about one-half of the sutures have their points of entrance and exit in the vaginal, and the others on the cutaneous side of the perineal triangle. It is owing to the fact that many practitioners omit the

vaginal sutures, that union in the deeper perineal structures is so often wanting. Sometimes the attempt is made to draw the vaginal portion of the rent together by a single suture, having its points of entrance and exit at the posterior commissure of the restored vulva, and passing around the vaginal portion of the rent, so as to pull its inner extremity forward and either draw the margins on either side into a pucker or cause them to gape. The following schematic drawings will illustrate :

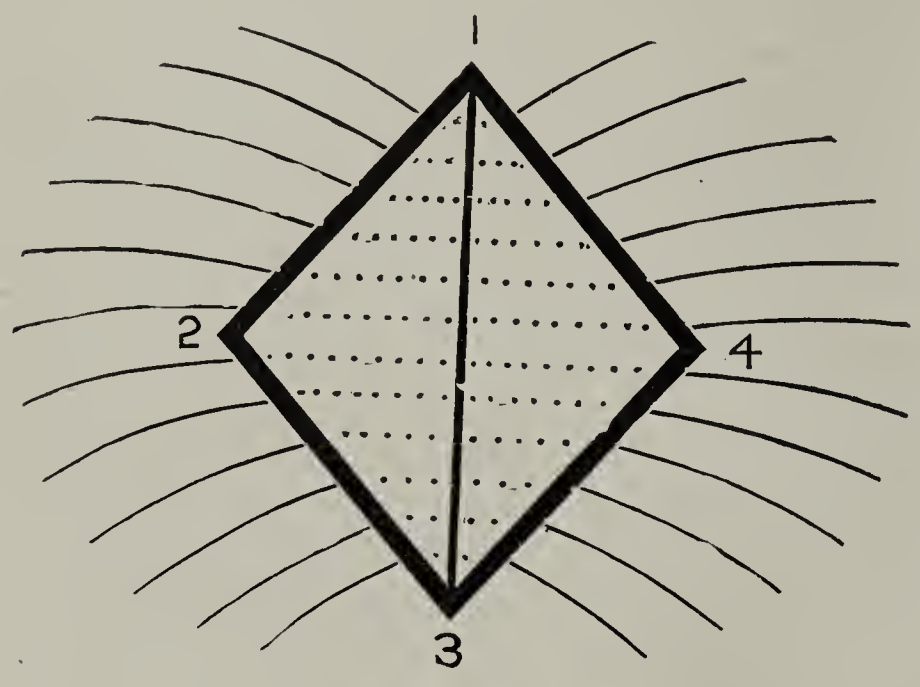


FIG. 1.

Figure 1 shows the two lateral triangular torn surfaces, with the sutures introduced in such manner that, when tightened, the surface 1, 2, 3 shall be in contact with the surface 1, 4, 3. All sutures above points 2 and 4 are in the vaginal portion, and those below 2 and 4 are in the cutaneous portion of the perinæum. On account of the difficulty of removing the vaginal sutures, silk or catgut might be substituted for silver in this part of the wound.

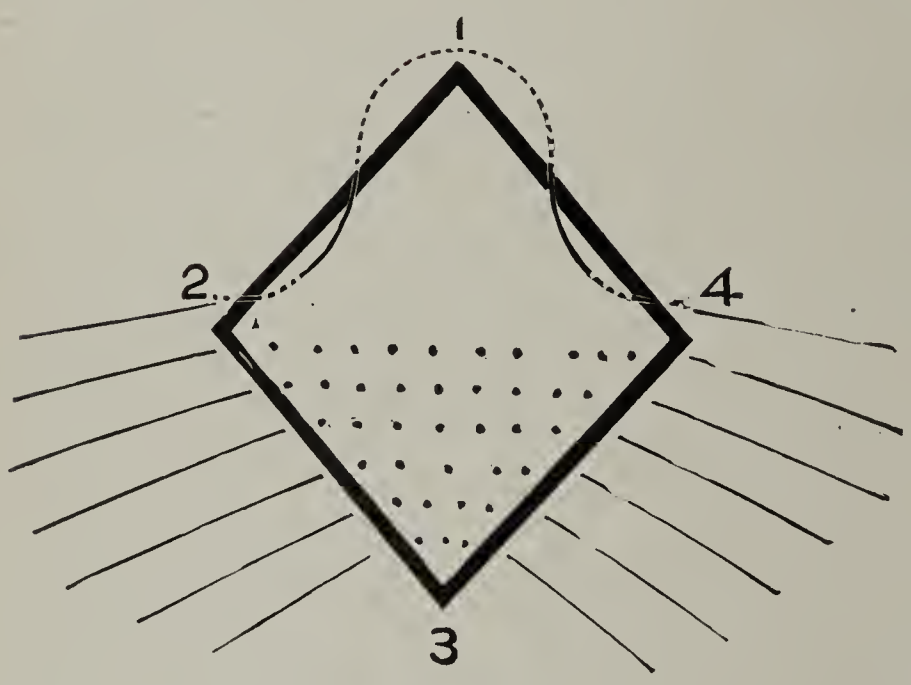


FIG. 2.

Figure 2 shows the sutures introduced on the cutaneous side, and a suture 1, 2, 4 on the vaginal side, in place of the proper vaginal sutures as shown in figure 1. It is evident that, after approximating the torn surfaces on the cutaneous side by tightening the cutaneous sutures, the vaginal suture 1, 2, 4, which properly belongs in the secondary operation, would in the primary operation for this form of rupture, only serve to prevent proper union of the vaginal margins of the wound by causing them to pucker or to gape.

Obviously, the last-named suture, although indispensable in the secondary operation, meets no indication in this formof rupture, but, by its action of corrugating the margins of the vaginal portion of the wound, tends rather to distort than to restore the perinæum.

But there is another form of perineal rupture, not mentioned in the standard text-books, and, so far as I am aware, hitherto undescribed, in which the operation just mentioned (see figure 1) is not only impossible, but its attempt must necessarily be followed by failure of deep union. It is a form in which the tissues are separated in three directions instead of two. Text-books on midwifery mention as an accident of great rarity the so-called central rupture, in which the child, instead of passing through the vulva, tears its way through the perineal body, and passes out by an opening somewhere between the posterior commissure of the vulva and the anus.

I would now ask your attention to one of the special points of this communication, which is that, although complete central rupture of the perinæum is a rare accident, incomplete central rupture is not so rare. Indeed, there is reason to suppose that in a large proportion of cases, the rent commences as a central rupture, but instead of going on to complete perforation of the perineal body, the tissues in front give way and retract to either side, by a rupture extending through the posterior commissure back toward the anus. Now, if the commencing central rupture be also in the antero-posterior direction, then the whole rupture is of the simple form already described ; but if the central portion of the rupture be transverse instead of antero-posterior, and extend from side to side of the perinæum, whether in a straight, curved or broken line, then all the perineal structures beyond it must be retracted toward the inner extremity of the vagina, and the closure of the perinæum thus ruptured must necessitate the approximation of tissue from three directions. The following figure will illustrate :

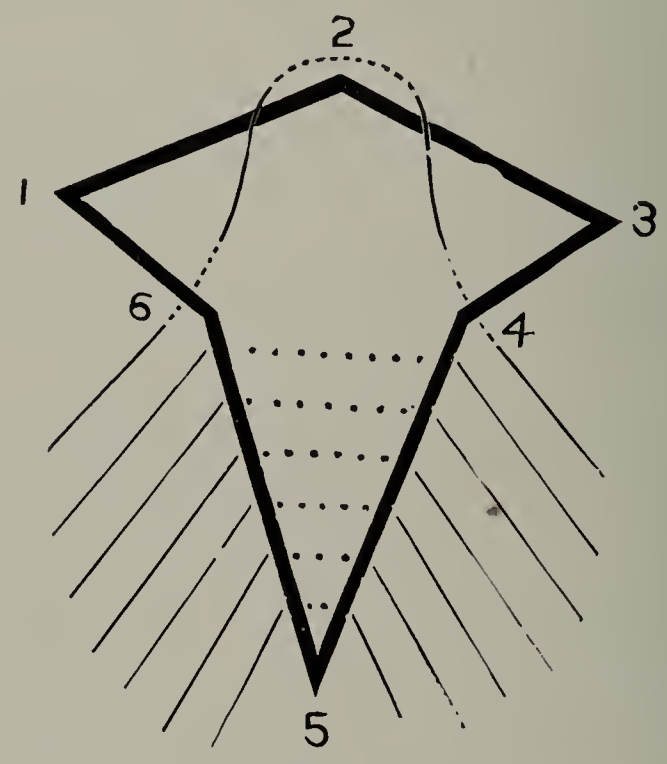


FIG. 3.

Figure 3 represents the transverse central rupture. The surfaces included within 6. 1. 2, 3, 4, are on the vaginal, and most of those between 6, 5, 4, are on the cutaneous portion. The sutures in the cutaneous portion are intended to approximate the tissues from side to side. The suture 6, 2, 4, when tightened, should draw into apposition the two margins of the transverse vaginal portion of the rent. The lines of union would then be in the shape of the letter T, its cross-piece in the vaginal, and its staff in the median line, and mostly in the cutaneous portion of the perinæum.

In addition to the vaginal suture 6, 2, 4, it is important to pass on either side of it three or four sutures to approximate more securely the transverse part of the rupture. These, having their points of entrance and exit in the vagina, would be difficult to remove until two or three weeks after operation, and should, therefore, be of catgut or carbolized silk instead of silver wire.

Uniform success further depends upon attention to certain details, which are here mentioned, with no claim to originality, but for the purpose of urging their importance. All shreds should be detached by scissors before closure, as they may, by sloughing, prevent union. If the lacerated surfaces have been much bruised or ground by the pressure of the child, they may, to advantage, be pared here and there, where the contusions seem greatest, but this will be required very little in the majority of cases. Silver wire has been demonstrated by experience to have great advantage over silk or catgut. It cannot, like the two latter, absorb moisture, and thus become septic and favor suppuration. Number twenty-six is a size well adapted to perineorrhaphy. The sutures should be deeply buried under the torn surfaces, and, if possible, should be visible nowhere between the points of entrance and exit. Suppuration along their track is much more probable if this caution be disregarded. Place the sutures about one-fourth inch apart, but care should be taken to twist them tightly enough only to bring the opposing surfaces into contact. The subsequent swelling will create sufficient tension. While the sutures are being secured, it is well to have the patient on a bed-pan, and the surfaces constantly irrigated with water from the fountain syringe, for the purpose of washing away all blood adhering to the wound. Solutions of carbolic acid over one per cent. are said to prevent union. Twisting the wires, as described by Emmett, has seemed to the writer much better than shotting them. The quill suture is clearly impossible where a part of them must have their points of entrance and exit inside the vagina. Occasionally superficial sutures will be needed, but they should include only the extreme margins of the mucous membrane or skin, their object being simply and only to bring these structures in apposition, so that when the operation is complete, no torn or denuded surface shall be visible, either on the cutaneous or mucous surfaces. Careful attention to these details will, in nearly every case, be followed by satisfactory union by first intention, the exceptions being, in general, those cases in which, from long continued pressure of the child on the perinæum, that organ had become so bruised as to make it incapable of union.

Upon examinations of a number of results thus obtained, several months after the patients had been discharged, the perinæum was found, in each case, to be of normal shape, *i. e.*, solid and triangular, but its volume was often so far below the normal standard that it was incapable of fulfilling perfectly its functions, and there was observed a resulting tendency to cystocele and the consequent uterine displacement from traction produced by the falling of the vaginal walls. This defect in volume may depend upon any one or all of a number of causes.

1. Possibly the restored perinæum may, in a limited number of cases, undergo superinvolution. 2. Evidently the new tissue, of which the line of union is formed, would tend to contract, and with it the perinæum also. Besides, the perinæum is held somewhat compressed during the healing process by the sutures, and this new first intention tissue would tend to tie the organ, as it were, into its compressed shape. 3. Probably, also, in many cases, union in the superficial part of the wound, which is more exposed to the discharges, may, to some extent, be defective. Certain it is, whatever be the cause, that, in my former experience, after involution, the restored perinæum was generally too small.

To obviate this difficulty I have, in a number of cases, recently resorted to a very simple procedure which has uniformly been followed by satisfactory results. The device simply consists of denuding a strip about three-sixteenths of an inch wide all round the torn surfaces. This strip should be a little wider in the vaginal portion of the wound than in the external cutaneous portion. It has the effect of increasing the extent of the surfaces to be united by as much as the width of the denuded strip. In consequence of the early and firm union which takes place between these smoothly denuded surfaces, the weaker union beneath is protected from the injurious influence of the discharges. Clearly, this procedure is essential to a perfect result in multiparæ, whose perineæ have suffered slight lacerations in previous labors. My own experience with it has been so satisfactory that I should not omit it in any case.

NOTE.—Since reading this paper, a remarkable and original communication has been presented by Dr. T. Addis Emmett to the American Gynæcological Society, in which he took the ground that in all ruptures of the perinæum, a successful result depends upon an operation which draws the crest of the posterior vaginal wall forward against the perinæum It is clear that this must be true in all cases of transverse rupture, and if the transverse form of rupture should prove, on further investigation, to be a common form, then a most apparent reason would be furnished for the position taken by Dr. Emmett. I am unable to make a definite statement with reference to the frequency of the transverse rupture, but may say, at least, that it can hardly be very rare, since I have, during the past few months, personally observed five cases, of which three were torn transversely. It may prove to be the more common form of the two.

DISCUSSION.

Dr. W. H. Wathen, of Louisville, said: All leading obstetricians now practice and recommend the immediate union of the lacerated perinæum after the most improved methods of operating, but that Dr. Dudley's practice of further denudation of the vaginal surfaces of the torn edges is generally unnecessary, and complicates the operation, so that the general practitioner, who does most of the obstetric practice, would not perform it. It is true, that by his method, we may get a thicker perineal body, but if the sutures be properly introduced, with no additional denudation, and the after treatment carefully attended to, the united edges will form a perinæum of normal dimensions, and the operation can be performed with no assistants, without an anæsthetic, and nothing is needed but a needle, and silver or silk sutures. Instead of complicating this operation, we should attempt to reduce it to such simplicity that any physician will feel equal to the task of repairing a recently ruptured perinæum, thereby preventing immediate or subsequent disagreeable results. All physicians should examine the perinæum in every labor, and where there is extensive laceration, partial

or complete, should operate at once. Deep lacerations of the perinæum, if not united, will result in subinvolution of the vagina, uterus and its appendages, and is often followed by prolapsus of the uterus and vagina, with cystocele or proctocele. This is especially apt to occur in the laboring classes, and is difficult to relieve, and sometimes cannot be cured.

TINNITUS AURIUM AND VERTIGO AS PROMINENT SYMPTOMS OF LITHÆMIA.

BY GEORGE H. LYMAN, M.D.

[Read before the Section for Clinical Medicine, Pathology and Hygiene of the Suffolk District Medical Society, November 14, 1883.]

There is, perhaps, no class of patients coming under a physician's observation, which are more troublesome than those cases of gastric and hepatic derangement due to the lithic acid diathesis, so-called. The functional disturbances are so associated with nervous phenomena, as to render the sufferer impatient and intractable, skeptical of your assertion that he has no serious organic disease, and ready to try every nostrum and accept every diagnosis but the true one from the numerous professional and lay friends whose sympathy he seeks.

Although lithæmia, lithuria, lithiasis, etc., have now become tolerably familiar terms to the profession, the whole subject still remains more or less obscure, especially the subjective semiology and the relative importance of the renal and hepatic pathology. The true nature of the affection often escapes recognition by the medical adviser until some case presents itself which cannot be ignored, when he is forced to closer inquiry into the antecedents and a more rigid analysis of the symptoms. He then discovers that he has to deal with something more than a mere gastric derangement, indigestion, dyspepsia, or what not, vague terms with which he has temporarily satisfied his own conscience and his patient's importunities; his blue pill and pepsin, his alkalies and sedatives, either separately or in some incongruous combination, have generally been a lamentable failure. In mild cases, to be sure, the mark is occasionally hit by some snap shot; but when the patient, superadded to his other grievances, has an incessant tinnitus, he loses faith in the stomach doctrine, or if his memory begins to suffer, or he has occasional attacks of vertigo, so sudden and severe as to make him unwilling to trust himself alone in the street, what wonder that he should seek other and special skill in brain, heart, eye or ear, to the great discredit of the general practitioner; for though he may get no more relief by the change, his subjective symptoms get more direct attention, and he, at any rate, is for the time being satisfied that merely local treatment is exactly what he needs.

While the first of the following cases was under observation, the admirable article of Dr. DaCosta appeared in the October number of the *American Journal of Medical Sciences* for 1881, in which these nervous phenomena especially are brought more prominently forward than in the famous Croonian Lectures of Dr. Murchison, which have done so much, by stimulating inquiry, to develop our knowledge of these lithæmic conditions. Although I cannot hope to add anything to the value of Dr. DaCosta's paper, possibly some allusion to a series of my own cases may be of interest to others.

The disorder in question has no fixed set of symptoms. The subjective expression of the pathological condition may manifest itself in protean forms. Either the gastric, rheumatic, renal, hepatic, cerebral, or cardiac, or several of them combined, may seem to predominate in any particular case, yet each is dependent in great measure upon certain lithuric conditions, which, being neglected, render any treatment unsatisfactory, if not wholly useless. There is necessarily neither nausea, constipation nor diarrhœa; headache, insomnia, or palpitations, myalgic pains, or urinary deposits, all in any given case. The subject of it, indeed, is quite likely to express himself as being otherwise in good health and strength, vigorous in mind and body, and yet so tormented at times, and apparently without cause, with one or more of the functional nervous phenomena described, as to induce in him the fear of some fatal organic defect of heart or brain.

Of the varied symptoms none are more distressing than the two which are the more immediate subject of this paper: A constant tinnitus aurium from which there is no escape during the waking hours, and which indeed often interferes with the sleep—buzzing, ringing, clicking or constant pulsation, for which no visible or tangible cause can be discovered either in gastric disorder or the external and internal auditory apparatus—is not only a constant source of annoyance but of serious apprehension to its unfortunate possessor; or still more if, either with or without this tinnitus, the victim finds himself the subject of sudden attacks of vertigo, so severe and decided as to cause a staggering gait, possibly complete prostration, as in an attack of epilepsy, the case assumes a gravity which startles and terrifies its subject into fear of impending death.

In one case a young, active business man, apparently in vigorous health, in addition to some of these symptoms, finds his memory failing to such a degree as to impair business efficiency; he can not recall the prices of his goods, the daily changes in stocks, etc., and fancies that he is threatened with paralysis, brain softening, or some dire evil which is to bring ruin upon him.

Another will have renal complications dependent wholly upon some hepatic derangement of function which sends him from one physician to another in the hope of relief to his fear of Bright's disease, diabetes, or cystic calculus, while still another may be complicated solely with tormenting muscular or arthritic pains. And so on one might recall instances of one more of these with the addition of purely nervous complications, simulating to the fears of the patient almost every conceivable organic disease.

The first of the ensuing cases only is given in some detail, it being a striking instance of the disorder, and one which, with its coincident organic cardiac complication, might well have caused much concern to both physician and patient, but which, when its true na-

ture was appreciated, proved to be susceptible of prompt and effectual relief.

Dr. ——, who had been in active practice for twenty-five years, about 1871 was attacked suddenly, after a moderate lunch, with vertigo so decided as to necessitate the recumbent posture, and cause great alarm to his family. There was no actual syncope, but a distressing sense of faintness, from which, however, he recovered in a few minutes; there was neither nausea, palpitation, nor headache. The attack was at the time attributed to lager beer, not very fresh, taken with the lunch. In early life, while a medical student, he had suffered from a bad attack of endocarditis, entailing mitral disease, during the course of a severe rheumatic fever. Three or four years later he had a second rheumatic seizure, very severe, and lasting, with little intermission, for six weeks, but without any additional cardiac complication. Since these attacks, any unusual exertion has inevitably induced palpitations and dyspnœa, but with the precautions which his professional knowledge indicated, these attacks were infrequent, giving but little trouble and no apprehension. At about the period of the first vertiginous seizure he began to be troubled wth tinnitus, but at rare intervals, and coincident with catarrhal attacks, nasal and faucial. For a time this attracted little attention, but subsequently became more frequent and annoying, until, at the end of some years, the tinnitus became almost constant through the day, and at night was frequently so annoying as seriously to interfere with sleep. Consulting his friends specially skilled in aural affections, it was by all agreed that the cause must be attributed to an extension of the catarrhal congestion to the middle ear, with fibroid thickening of the canal, and that, in view of its long duration, little encouragement could be given for its permanent relief. The verdict was, perforce, accepted, and for years the continued singing was endured, with such philosophy as could be mustered, though occasionally the pulsations would become so aggravated as to be almost unendurable. From 1871 to 1879 occasional attacks of vertigo occurred, but generally late in the evening, and after days of unusual fatigue. These were always temporarily relieved by a dram or two of any mild stimulant. The attacks were at one time thought to be possibly due to his habit of smoking, but no direct relation could ever be traced. In 1879, when leaving the water-closet one morning, a sudden and severe attack occurred, with distressing faintness and prostration, though the pulse was of good strength, and there was no palpitation. Some time elapsed before he was able to leave the the floor for a couch, and subsequently to resume his daily work, in the pursuit of which he now, for the first time, noticed that his gait was uncertain. For the ensuing two years there were no more, or only very slight, attacks of vertigo, but the sense of inability to walk straight was more or less manifest, and at times to so great a degree as to make him fear the charge of intoxication. The staggering could only be overcome by stopping, sitting down, or grasping the first tree or fence for a few minutes.

Finally, in October, 1881, when apparently perfectly well, there being neither gastric nor cardiac symptoms, a very sudden and severe attack of vertigo occurred while walking through a hospital ward, and a chair at hand alone prevented his falling. The faintness was relieved by a swallow of brandy, and the visit finished without difficulty.

Matters had now assumed so grave an aspect that he began seriously to study his own case, as he would have been compelled to do in the case of any other patient. First, the condition of the heart was investigated as a possible cause, but competent examination revealed no increase of the old mitral disease, no evidence of fatty degeneration, the pulse in fullness, frequency, and rhythm normal, neither palpitations nor dyspnœa. No evidence whatever of any organic cerebral disorder. The renal function was apparently perfect; the urine of proper specific gravity, and normal in quantity, although there was a tendency to abnormal acidity. In the absence of any deposit or other symptoms the urine was only roughly tested at any time; unfortunately no accurate analysis was ever made. The digestion was vigorous; the bowels, as always during life, regular, with exceptions noted hereafter. I should now state that since the two rheumatic seizures in early life, above mentioned, he has been subject to frequent attacks of pain and swelling in the small joints of the hands and toes, more especially the former, and also to myalgia in shoulders, loins and hips. These have never been accompanied by fever nor by any severe disturbance of the general health, but always by extreme irritability, nervousness and impatience, with more or less torpor of the bowels. The appetite, even in the worst of these, was always good, too good. These attacks were usually directly traceable to indulgence in certain articles of food or drink, and never found susceptible of mitigation by drugs of any kind until these special things were omitted for a time. Half a bottle of claret or burgundy, for instance, would almost certainly induce redness, swelling and pain in the knuckles, sometimes on a single trial, more often at the end of a few days; strawberries always, and most other fruits if eaten after meridian; malt liquors of any kind if used continuously; while, on the other hand, the moderate long-continued use of brandy, whiskey, thin, dry sherry, or dry champagne agreed perfectly if taken in moderation with dinner.

The sharp gouty pains and enlargement and redness of the smaller joints, in connection with the nervous irritability, suggested of course, the lithic acid diathesis, and careful continued observation proved a direct connection between the exacerbations and increased tinnitus and vertigo.

A more careful course of diet was at once instituted. The amount of nitrogenous and carbonaceous food was greatly reduced, and all stimulants, and malt liquors, always in daily, but never in excessive, use, were discarded entirely. As medicines, a full dose of citrate of lithia was given before each meal, and an active dose of bitter water on rising each morning, the latter producing one *full* liquid evacuation daily. The effect of this course was very decided. It was continued with hardly an intermission for four months, though on several occasions, when too much animal

food or a glass or two of claret, sherry, or madeira were indulged in, the warnings were unmistakable. At the end of this period the the tinnitus was hardly noticeable, the vertigo entirely gone, and the gouty pains a thing of the past. For the past year his health has been more vigorous than ever, but only at the price of constant watchfulness, for any attempt at the indulgences of the table, either at once or with the lapse of two or three days, brings its penalty in arthritic pain, tinnitus, or vertigo, one or all.

The only wines that seem to cause no trouble are a thin table sherry and dry champagne. Better than either is a tablespoonful of brandy with dinner, which seems to be not only harmless but a positive benefit.

I make no apology for giving this case at some length, as I consider it to be a good illustration of a certain class of lithæmic cases, and typical of the nervous and gouty complications, while remarkably free from those renal and gastric symptoms which more generally accompany and obscure the diagnosis; for, as will be noticed, there were none of the ordinary symptoms to call attention to what was undoubtedly the true source of the difficulty, the imperfect assimilation of the ingesta. That vertigo and tinnitus, as well as other obscure and intractable complaints, especially those of the skin and mucous membranes, may often be traced to this so-called lithuric condition, whether it be designated as lithæmia or suppressed gout, there can be no doubt. I could give from my notes many other cases in which relief from distressing symptoms of long duration, and where the sufferers had become almost hopeless of relief, would be shown, but the narration would serve no other purpose than to lengthen this already tedious paper if given in detail. I will merely allude to a few of them as showing some of the common differences in type.

I. The son of a physician; married; aged 46; a high liver, had for three years been subject to these nervous symptoms. In this case, renal congestion was so marked a feature as to cause apprehension of some organic disease of the kidneys. Under proper treatment, the functions of the liver were restored, the nervous and renal symptoms disappeared, and he regained, and so far as I know is still in comparatively vigorous health.

II. A perfectly temperate man, aged 56, was for two years subject to vertigo. He had also muscular debility, nausea, and some anasarca. Under careful regulation of the diet, free action of the bowels, nitro-muriatic acid, etc., the vertigo and muscular weakness disappeared, and his apprehensions with them.

III. A lady of middle age, with some suspicious renal symptoms, headache, nausea, œdema, etc., was under my care at intervals for two years. Early in 1882, though much improved in many respects, the nausea especially having nearly disappeared, she consulted me again for frequent and painful micturition and incessant tinnitus aurium. By the use of lithates, iron and aloes, bitter water, with whiskey and cream and a restricted diet, she obtained relief from all the nervous complications.

IV. A well-nourished and apparently vigorous man of 32, in active mercantile life, complained bitterly of seminal emissions and loss of venereal appetite, but chiefly of a constant sense of cerebral confusion, with loss of memory, at times so absolute that he could not remember the prices of his merchandise or make simple arithmetical calculations. He was married, and of steady habits, excepting that his meals were irregular and hastily eaten. He suffered to a slight degree from hæmorrhoids and headache. The emissions proved to be trifling and distinctly prostatic, not seminal. Being an excessive smoker, tobacco was strictly forbidden, and with proper regulation of the quantity and quality of his diet, and the use of saline laxatives and mineral tonics, the unpleasant cerebral phenomena were relieved entirely and permanently, a year having now elapsed without any recurrence.

V. While writing this paper a somewhat similar case occurs to me, not of vertigo, but of most unpleasant cerebral confusion, occasional attacks of distressing tinnitus, with muscular pains, tenderness and swelling of the small joints, and an increased renal secretion, with painful micturition. There has also been on several occasions a decided loss of power in the extensors of the forearm. The patient has been under my charge at intervals for ten years, and has had repeated recoveries from and recurrences of these symptoms, and will probably continue to have them to the end, for being of ample means and extremely indolent habits, the requisite perseverance in treatment is not attainable. It is sufficient to say that the tinnitus and other symptoms in her case always and readily yield to the treatment indicated so long as it is persevered in.

VI. I will allude to but one more. An old gentleman past seventy, has been for many years a notable specimen of the hypochondriac. He has, however, certain difficulties that are not imaginary, especially prostatic enlargement in an aggravated degree. He has for years suffered from tinnitus, slight vertigo, palpitations, and an aggravated catarrh of all the mucus membranes from the alæ nasi to the pylorus. He was under my care a year or two before I could get him under decent control. He was depressed, skeptical, sure that he was to lose his mind or die suddenly of apoplexy or heart disease, would follow a prescription for a day and then seek another; buy every quack medicine that was recommended (and serve it, fortunately, in the same way) until finally, under the threat that I could or would do no more, a promise of obedience was exacted and tolerably kept, until now, under comparatively simple treatment, life is no longer a burden to him or his friends, the tinnitus and vertigo, the catarrhal troubles and cardiac irregularities being immensely relieved.

The object of this paper is to call attention to those lithæmic cases in which tinnitus and vertigo are prominent symptoms, they being the most alarming and distressing to the patient of the nervous phenomena induced by an excess of lithic acid in the blood.

Many cases of tinnitus, no doubt, are very temporary, such, for instance, as are caused by slight gastric derangement, an excess of ceruminous deposit local congestions, etc., while other and incurable

cases are due to actual organic changes in the auditory apparatus, and the same remark will apply to many cases of vertigo, whether from an acid stomach or actual fatty degeneration of the circulatory apparatus; but, other than these, I can recall many instances occurring in former years, where not suspecting what I now believe to have been the true cause, I was unable to afford that relief which I am now confident would have followed a more accurate diagnosis.

How, in deranged function of the liver, imperfect disintegration and oxidation of the albuminoids results in the excess of lithic acid in the blood, is a physiological problem, for the discussion of which I must refer to Flint, Draper, Bence Jones, Fothergill, Charcot, Murchison, and many others. The opinions of writers and experimenters are as yet quite at variance upon many points. A few remarks only are needed in this connection for the purposes of this paper.

And first, it is not sufficient to say that tinnitus is due to deranged circulation or irregular muscular action, for though both are probably true, what causes those derangements; and so of vertigo. We must go farther back, and find what causes are at work in the blood to influence the vaso-motor and trophic processes. An embolus in the middle cerebral we say results in aphasia, but we mean that aphasia is due to deficient nutrition in the brain cells.

That an excess of nitrogenous and carbonaceous foods, or, there being no excess, a relative deficiency of oxygen, results in imperfect oxidation, seems probable. Were the oxidation complete, instead of insoluble lithic acid we should get soluble urea for normal elimination by the kidneys.

On the other hand, we have the opposite view that an undue prominence has been given to uric acid in these gouty or lithæmic cases; that the difficulty rests rather with its insolubility than in its excessive production, that it is a consequence rather than a cause, and that the saccharine rather than the nitrogenous elements of the food are the most mischievous.[1] However this may be, the kidneys seem to play an eliminatory role chiefly, although it must be remembered that the necessary excess in activity may lead eventually to chronic congestion and secondary organic changes of structure.

The vaso-motor and trophic influences, the mode of distribution, as well as the nutritive quality of the blood, become also important factors in the production of the cerebral symptoms under discussion. If the blood of the living body should be always alkaline, it is not difficult to see that an abnormal excess of lithic acid would create these vaso-motor or trophic disturbances, one or both, in the circulation and nutrition of the brain and cord, a diminished alkalinity, whether relative or absolute, diminishing the contractility of the heart.

As to treatment, it is already sufficiently indicated, if we accept the theory of the lithæmic origin of the trouble. That the liver may rest from its overcharged labor, saccharine, nitrogenous, and alcoholic ingesta must be diminished, both sedentary habits on the one hand and excessive fatigue on the other, and over cerebral exhaustion from study or worry avoided, they all tending to weaken the circulation, and so favor acid accumulation.

With regard to the use of tonics, mineral or vegetable, they are often worse than useless, especially in the early stage of average cases, in which, with a careful diet, mild saline laxatives perseveringly used are the best tonics. In anæmic or broken-down cases their use may be, of course, a necessity.

In most cases alkaline salts are indispensable, and of these I have found citrate of lithia as useful as any, and perhaps the most agreeable to the stomach, although occasionally it overstimulates the kidney and must be suspended for a time, or replaced by soda or potash, taken an hour after meals, these being in all cases preferable when much flatulence is complained of. Salicylate of lithia I have not yet tried.

Where the pain is myalgic, muriate of ammonia in full doses will often give prompt relief, though if not within a day or two, its continuance is useless. I *have found* no benefit from it in arthritic pain or tenderness. Mercurials, podophyllin, colchium, etc., must, I think, be rarely needed, and are objectionable from their depressing effect. Their influence upon the biliary secretion is at least questionable, and if the small intestines are kept free from biliary accumulation by saline or other laxatives, such as ipecac, rhubarb, and soda, they are not required. If there be any one thing which I should lay the most stress upon throughout the treatment it would be the use of aperient bitter waters. Nothing proves so promptly effectual in removing those exacerbations of arthritic tenderness, vertigo, and tinnitus, which the most tractable patient will occasionally bring upon himself by some indiscretion, as an extra dose of Hunyadi or Pullna water taken for a day or two in the morning fasting. By an extra dose I mean a larger and more active one, for I would have a smaller dose of the same used almost continuously and for months after the cessation of the urgent symptoms. These waters keep the small intestines free, and the sulphates of soda and magnesia with which *they* are highly charged have a cholagogue influence which goes for something. Their influence as combined in these waters is decidedly more satisfactory than when taken alone. The Carlsbad or *Sprudel* salts may also be mentioned in this connection, especially as they have been recently discovered to contain lithia, which the others do not.

The aggravated catarrhal complications may now and then require especial treatment, but in a large proportion of cases the troublesome nasal and faucial congestion will be found to yield with the lithæmia on which it depends.

As to the use of stimulants, most patients are probably better for entire abstinence, but in a certain class such abstinence can be with difficulty enforced. I know of no rule by which one can be guided but the experience of the patient himself. As a rule., of the light wines, the driest are the best. One will drink claret with impunity, while to others it is an undoubted poison, and the same may be said of champagne, burgundy, hock, etc. Climate, and especially hygrometric conditions, become here, I be-

[1] See Ralfe on Morbid Urine, pages 65–98.

lieve, an important factor. It is now a well-known fact that a patient will indulge with impunity in England or on the Continent in beverages both in quantity and in quality which, in our drier climate, cannot be assimilated. The first case reported was a striking instance of this, as was proved by his experience in repeated visits abroad.

In certain cases, stimulants with iron or bark and acids may, as I have said, become a necessity, especially if the alkaline treatment induces any marked impoverishment of the blood, for in all cases a lowering treatment is to be avoided. It must not be forgotten that one's living may be generous without being excessive in either food or drinks.

The patient should always be made to nnderstand that the relief which he may receive is to be permanent only so long as the conditions of the cure are complied with; and that any indulgence or excess will almost inevitably be followed by its penalty, and moreover, remembering that too frequent recurrences of merely functional disorder are likely to result eventually in actual organic changes, no longer amenable to curative treatment.

In conclusion, I may be permitted to say that while the pathology of these affections remains, as at present, an open question with different observers, the successful treatment of a series of cases may help materially in its solution. Where medical Science is defective, medical Art may assist in placing it upon a right foundation.

RECENT VIEWS RESPECTING THE DIAGNOSIS AND TREATMENT OF LITHÆMIA.

BY JAMES J. PUTNAM, M.D.

(Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, November, 14, 1883.

It is well known that a tendency has been manifest of late among medical men in this country, as for a long time past in England, to diagnosticate as suppressed gout, or lithæmia, cases presenting a great variety of nervous symptoms, often anomalous and distressing in character, generally occurring in patients of gouty, but sometimes even in those of non-gouty descent.

This tendency has been met in many quarters with incredulity, and some men of conservative temperament would be well content to let the matter slip by with a verdict of non-proven. Where no overt gout exists it is gratuitous to assume suppressed gout, they say, and the argument seems applicable to this country and generation, in which overt gout is so rare. Such an attitude seems to me to involve the disregard of clinical facts of manifest importance, yet I admit that even this is better than to abandon one's adherence to the laws of evidence for the sake of a plausible hypothesis. It is evident that there is a middle ground to be discovered, and it is important, in the interests of practice as well as theory, that its limits should be defined as accurately as possible.

Two questions naturally suggest themselves for solution in this connection; first, what are the ascertained facts in the matter; second, what are the inferences which involve the least infraction of sound reasoning.

The conclusions which seem to me the best established are:—

(1.) That various nervous symptoms, and symptom-groups, (as well as certain affections of the skin and mucous membranes) may be due to disorders of nutrition of the body at large, and are best treated from that stand-point.

(2.) That, however, it has not been shown, nor rendered especially probable, that these symptoms are apt to be due to an excess of uric acid in the blood, except in so far as they occur in true gout.

(3.) That the effects of treatment in cases of so-called lithæmia are not such as to lend much support to the belief that it is a specific disease.

(4.) That there is abundant justification by analogy for the view that the impaired health found in the families of gouty persons need not itself be of a gouty nature.

(5) That most, if not all, of the so-called lithæmic spmptoms may and often do originate in a primary disorder of the nervous system (including true neurasthenia).

It will be worth while, to begin with, to glance briefly at the few advances which have been made in the pathology of true gout during the past few years.

It is well known that the one discovery bearing on this subject which has been able to maintain itself, almost unassailed, is that announced by Garrod in 1848, that the blood of gouty patients contains uric acid.

The explanations by which he proposed to account for the outbreaks of the disease, namely, that diminished excretory power of the kidneys caused a further accumulation of the uric acid in the blood, and that diminished alkalinity of the blood caused the precipitation of urate of soda in the tissues, have not fully stood the test of criticism. They remain as unproved, indeed as improbable, though noteworthy speculations.

It is, however, worth bearing in mind that diminished alkalinity of the blood, such as is supposed to arise from dyspepsia with constant formation of acid products in the intestinal tracts, though it may not cause gout or lithæmia, has been regarded as accounting for a variety of nervous symptoms such as are usually attributed to suppressed gout. This is a view taken for example by Dr. Ralfe, in his interesting little book on Morbid Urine.

Garrod's original researches left the origin of the uric acid unknown, though he believed that the kidneys themselves should be exonerated.

In 1874 Murchison delivered his able and suggestive Croonian Lectures on Functional Diseases of the Liver, and then first proposed, I believe, the term *lithæmia*. Murchison's aim was to show that, among its other important functions, the liver was the great laboratory for the conversion of nitrogenous compounds into urea, and inasmuch as uric acid resembles urea except in containing less oxygen, and may even be converted into urea, it was maintained that uric acid was one of the suboxidation products of albumenmetabolism, and that the liver might be consid-

ered responsible for all the range of diseases, from chronic bronchitis and dyspepsia to gout and chronic Bright's disease, which could be laid to the door of the baneful uric acid and its congeners in the blood.

The liver is still admitted to be the seat of much chemical change, and the efforts of Murchison no doubt did much to clear its somewhat rusty clinical reputation, and to call general attention to its important functions and diseases. Yet, in spite of the guarded support of Charcot a few years later, Murchison's theory of hepatic lithæmia has not taken the place in pathology which its author claimed for it. The suboxidation part of it, which is for us the important portion, deserves special consideration, since it concerns the doctrines of the treatment of gout as well as of its pathology.

It is now almost universally regarded as probable that in health uric acid and urea are parallel and normal products of albuminous disintegration, and not simply representatives of different states in one process.[1]

Increasing the oxygen supply makes no difference in the oxidation of uric acid. The amount of oxygen in the blood does not in fact determine the amount of chemical change in the body, but is determined by it, the oxygen being called in only to repair the waste already caused.[2] The oxidation of nitrogenous compounds is a function of the tissues, and its activity is measured by the number and efficiency of the cells of which the tissues are composed. The oxygen by which this is accomplished is stored up in the tissues. The oxygen in the blood serves to feed this reservoir, but to this end there is always enough unless the blood is actually starved, as in asphyxia.[3] Similarly, the reason why carbonaceous food is not good for gouty persons (when such is the case), is not because it attracts the oxygen which would have gone to complete the oxidation of the albumen, but for more complex reasons (v. Voit.)

Setting aside, however, the special question of the relation of uric acid to urea, it is quite true that the general doctrine that diseases of various kinds (renal among the rest) may arise from the presence in the circulating fluids of the results of imperfect metamorphosis of food, still holds a respected place among pathologists, as an important, although as yet unproved hypothesis. As a practical matter, it is certainly very proper that in any doubtful case we should make every effort to improve the efficiency of the tissues to convert and assimilate food, both directly, by acting on the tissues and the circulation, and indirectly, by modifying the quality and quantity of the food, and there are good clinical reasons for thinking that in that way we shall often succeed in removing obscure nervous symptoms, but this admission is by no means equivalent to the adoption of the prevailing theory of lithæmia.

Within the past year, our knowledge of the gouty processes has been enriched by two important investigations, carried on respectively by Garrod[4] and by Ebstein,[5] Professor of Clinical Medicine in Gottingen. Garrod's investigations were mainly directed to the question of the relation of the excretion of uric acid to the formation of calculi, but in the course of them he makes some interesting statements about the amount of uric acid excreted by birds, which seem to prove that in them this substance must be formed in the kidney itself; and if in them, he thinks, then in all probability in man also, contrary to his former view. The quantity of this excretion in certain birds is indeed enormons, the daily amount being sometimes more than the whole weight of the kidneys. Knowing the average amount which the blood contains, and calculating the number of times that the kidneys refill themselves with blood in the course of the day, Garrod confidently affirms that they could not in that way obtain a sixth part of the uric acid which they excrete. He claims also to have found that the reason that the urine of herbivorous animals contains no uric acid, is because they form hippuric acid from their food, and affirms that the uric acid excreted by man is greatly diminished, or made to disappear, if benzoic acid, a congener of hippuric acid, is taken by the stomach, a suggestion important for the treatment both of calculus and gravel, and of true lithæmia.

The able investigations by Ebstein are largely experimental in character. He fully indorses the uric acid theory of Garrod, and makes it probable that the uric acid salts, even while still in solution, impair the nutrition of the tissues through which they pass, and if in concentrated solution impair them (as proved to be possible by actual experiment) to such an extent that the life of the tissues is destroyed, and in dying develop an acid reaction which causes the precipitation in them of the urate of soda. To this irritating action of these salts in solution in the blood he thinks the various symptoms referable to affections of the mucous membranes, the nervous system, the walls of the blood-vessels, etc., are due, and in fact he fully gives in his adherence to the doctrine of lithæmia *in the gouty*. The uric acid he believes to be formed not in one alone, but in many organs, among which are to be reckoned (in gout, though not under normal circumstances) the marrow of the bones and the muscles. Ebstein regards gout, therefore, as a disorder of nutrition in consequence of which uric acid is formed abnormally in the bones and muscles. He considers it analogous to cystinuria, or to diabetes, but does not recognize the agency of any underlying neurosis which various writers, especially Dr. Duckworth, have assumed. He extends widely the role played by uric acid, about as widely, in fact, as any of the English writers, but would say, that without uric acid no gout. At the same time he thinks that this excessive production of uric acid may remain through life without causing symptoms of any kind, if no exciting cause comes in to provoke them.

The arguments by which Dr. Duckworth[6] who is able to array a number of the highest authorities on his side, endeavors to prove gout to be at bottom a

[1] Vide for ex. Cohnheim's Handbuch des allgem, Pathologie.

[2] Voit. Die Ernährung, Hermann's Handbuch, p. 279.

[3] Voit. Senator.

[4] *Lancet*, 1883, Vol. I.

[5] Natur u. Behandl. d. Gicht.

[6] Brain, 1881. and elsewhere.

tropho-neurosis, either primary and inherited, or secondary and induced by blood-poisoning, are ingenious and forcible, but of such a nature that it would be impossible to reproduce them here at length. He thinks that without invoking the periodic action of the nervous system it is impossible to explain the outbreaks of the attack, which come sometimes without apparent cause, usually early in the morning, and are apt to be preceded by a sense of euphoria, such as is sometimes seen before an attack of epilepsy, migraine, and the like; further, that gout evidently stands in a close relationship of mutual dependence and interchangeability with other neuroses, such as epilepsy, hysteria, asthma, migraine, angina pectoris; that the exciting causes of the acute seizures are often such as depress nervous force, like strong mental and moral excitements, venereal excesses, or sudden shock, without, however, acting directly upon the affected joints; and, finally, that the ability of the nervous system to influence nutrition, as seen in the arthritic complications of certain forms of locomotor ataxia and other diseases, is becoming more and more fully recognized.

Let us now turn to a consideration of the doctrine of lithæmia or suppressed gout, taking as representatives of the positive side of the discussion two of its most earnest supporters in this country, Dr. DaCosta,[1] of Philadelphia, and Dr. W. H. Draper, of New York.

Dr. Draper's views were expressed in one of the American Clinical Lectures in 1875, and more recently, in a modified form, in a paper read before the New York Academy of Medicine in February, 1883.[2]

In the latter paper, Dr. Draper refers to the difficulties in the way of the humoral or chemical theory of gout, and admits that it may be primarily a neurosis, and that the over-production of uric acid and its presence in the blood may be only an epi-phenomenon in the disease. His views of the subject of diet have also been modified, but he finds that, in general terms, gouty patients and their descendants have especial difficulty in the digestion of saccharine and farinaceous food. The symptoms described in the first paper as of a lithæmic origin include flatulent and acid dyspepsia, painful and frequent micturition, commonly associated with the presence of uric acid, urates or oxalates in the urine, neuralgic symptoms of unusual type and without tender points, burning sensations in the palms and soles, numbness of the hands and fore-arms, pain in the region of the tendo-Achillis and the dorsum of the foot, hypochondriasis and hysteria, chronic bronchitis, asthma, conjunctivitis, gastro-intestinal catarrh, aphthous ulcerations in the mouth, obstinate eczematous and erythematous lesions of the skin, the latter sometimes showing themselves in sudden swelling of the eyelids, cheeks, lips, and tongue, together with many other symptoms.

Dr. DaCosta lays especial stress upon vertigo, severe acute periodical headaches of neuralgic type, neuralgia, sometimes bilateral, burning pains in the feet and hands, and also gastralgia, cramps in the legs, sleeplessness, irritability, or great depression of spirits, and the like. Other writers have referred to tinnitus aurium, (such as Dr. Lyman has described to-night,) irritability of the bladder, painful menstruation, etc.

In seeking for the pathology of these symptoms, two questions naturally present themselves:

1. What evidence is there of the existence of an excess of uric acid in the blood; a condition which is assumed without argument by DaCosta, and by Draper in the earlier, though not in the later paper?

2. What other signs have we that would justify us in setting apart these cases as belonging in a group by themselves; or as standing in any definite relation to the gouty diathesis?

Of direct evidence by examinations of the blood, none, so far as I can learn, has been furnished (though Garrod speaks of its great desirability), except that Draper found an excess of uric acid in a case of gonorrhœal rheumatism which he believed to be of gouty origin. Ball (quoted by Charcot in Diseases of the Liver) found uric acid, to be sure, in the blood of a patient suffering from gravel, an observation to which we shall refer again further on. The only indirect evidence that is offered of the presence of uric acid in the blood consists in the more or less persistent presence in the urine of free uric acid or its salts. This was noted in almost all of DaCosta's cases, and he dwells upon it at some length.

What is the real significance of this sign? Chemically, it certainly indicates nothing more than increased acidity or condensation of the urine, no matter from what cause, which facilitates a precipitation of the uric acid and urates. A real and persistent increase of the total amount of uric acid is very exceptional, and would usually indicate, according to Ralfe, some serious organic or constitutional disorder, such as organic disease of the liver or spleen, phthisis, or cancer. It is not even a regular accompaniment of true gout.

From the clinical standpoint, the matter is not quite so simple. So good an observer as Garrod finds from analysis of his numerous cases, that gravel and calculus are more prevalent among the descendants of the gouty than among those of the non-gouty, although the gouty patients themselves do not often pass calculi.

The same view is taken by most other writers.[1] The observation of Ball has already been quoted. Charcot (Diseases of the Liver) refers to the observations of Rayer as pointing in the same direction, but says that he has himself several times examined the blood and serum from blisters of patients habitually passing uric acid crystals or concretions without finding a trace of uric acid. On the whole, in spite of the mysterious but accepted relationship between gout and gravel, it is impossible to read at all extensively the views of the best authorities without becoming convinced of two facts: First, that to draw any inference from the precipitation of uric acid and urates in the urine, this must be proved to be really habitual, and not to be accounted for by concentration of the urine due to ingestion of too little fluid, or to temporary indigestion; and second, that even when this

[1] *American Journal of Medical Sciences*, 1881.

[2] *New York Record*, February 24.

[1] Vide Nouveau Dict. de Med. et Chir. art. Gravelle; where this whole question is treated with much fairness.

is not the case the most that we can say is that we have evidence of a disorder of nutrition which is sometimes associated with lithæmia.

I have in my mind a large family of persons who are, or have been almost all, sufferers from functional nervous disorders, such as insomnia, visceral neuralgias, mental depression, irregularity of the heart, etc. One of them has had what was perhaps gout, though that disease is not known to have been inherited. One member passes uric acid at long intervals for some days at a time, but the one who is the most free from morbid symptoms, and usually in good health, passes urine which habitually deposits urates in considerable quantity.

To turn to the second question, Do the symptoms in the cases that have been called lithæmia present anything really characteristic, we will not say of lithæmia, but of any classifiable condition, and especially of one related in any way to gout?

There is some reason, no doubt, to think that this is the case.

The burning palms and soles, the anomalous and sometimes bilateral neuralgias, the gastralgia and marked tendency to catarrh of the mucous membranes, and other symptoms are said to be frequently met with, both in cases of true gout, and on the other hand in cases of another class, the limits of which we are trying to define. This class is believed by excellent observers to be very largely recruited from the families of gouty patients. Two considerations are, however, especially to be borne in mind:

(1.) That we are only just beginning to learn the range of symptoms due to functional disorders of the nervous system from causes arising within itself or from simple insufficiency of nourishment (so-called neurasthenia).

(2.) That it is by no means certain that even in true gout, all the symptoms referred to are due to the uric acid in the blood, since many of them may occur, as is pointed out by Ralfe, under any circumstances, such as scurvy, where the relative acidity of the blood is increased in consequence of the quality of the food (withdrawal of alkaline bases, etc.), or in disorders of the digestion, some of these latter being at times dependent on syphilis or other constitutional diseases.

To return to the first consideration, it is difficult to see why we should, in the interests of lithæmia, dispossess the doctrine of primary neurasthenia of its just claims. There seems no reason why a person should not acquire or inherit, perhaps from a gouty parent, a poorly-working nervous system, and this seems often to happen, since the symptoms referred to may be present without there being any sign in the history of the patient or the condition of the urine to suggest a gouty origin. And if the the nervous system can suffer upon its own account, the burden of proof surely rests with those who would refer the results actually observed to the immediate influence of poisoned blood. Whether or not lithæmia is inherited from gouty parents, however, it appears certain that such persons are apt to exhibit themselves, and to transmit to their descendants strongly marked neuroses, both general and special.

Finally, how far is it possible to judge from the effects of treatment whether the blood is lithæmic, or whether a given set of symptoms are related to true gout? First, we must decide in what the appropriate treatment of true gout consists. Is there anything about it which can be called specific? Some years ago this question would, no doubt, have been answered in the affirmative, but the notions with regard to the treatment of gout have, of late, undergone a considerable change. It has long been known, and the point has been dwelt upon anew at some length by Garrod in his recent paper, that the excretion of uric acid is very little affected by an increase or diminution of albuminous food, and Garrod distinctly states that he believes patients to have suffered in their health from the scanty diet of former times. Dr. Draper, as well as most other writers, now believe that nitrogenous food may be taken pretty freely. It is the hydrocarbons of the food, the sugar and the starch, which are now considered the objectionable portions, but it is very interesting to see the different grounds on which this opinion is maintained. Thus Ralfe, believing that gout is a disease of too great acidity, and analogous to scurvy and rheumatism, thinks the sugar is converted in the intestinal canal to lactic acid, and eventually in the blood to carbonic acid, and that the alkalinity of the fluid is thereby reduced.

Dr. Draper finds that gouty patients, as a rule, cannot digest sugar or starch easily, and that as a clinical fact these substances do not agree with them, and should be interdicted. Ebstein thinks them objectionable solely because they increase the corpulence of the patients, and thereby indirectly predispose to gout in various ways; an idea which is upheld by some observations in a different field by Frænkel,[1] namely, that corpulent persons are more likely to suffer from enlargement of the heart through interference with the abdominal circulation. Garrod believes himself to have discovered that it is not sugar in its natural state, but only in a partially fermented state, as in beer, wines, certain fruits, and the like, that is objectionable, perhaps from giving rise to some injurious ferment.

Again, apart from gouty tendencies, there are stomachs enough to whom sugar and starch are not indifferent, and it is evident that more extended observations are needed before we can admit that the ability to digest and assimilate hydrocarbonaceous food is enough to distinguish between the possessor of the gouty taint and dyspeptics of other kinds. This does not, of course, interfere with the fact that the observations of Dr. Draper and others tending to show that there is a large class of nervous dyspeptics for whom sugar and starch are inadmissible are, if confirmed, of the highest practical importance.

The truth probably is, that the nutrition of patients of this class of so-called lithæmics (in reality perhaps not lithæmic at all) has to be carefully watched, and adjusted to the case in hand.

For my own part, I am inclined to think with

[1] *Zeitschrift der klin. Med.*, 4ter Band

Ralfe, that over-feeding, combined with freedom from excitement and care, is often for a time a better plan even than underfeeding or moderate, with exercise; while the combination of over-feeding and nervous excitement is, perhaps, an especially unfortunate one. Certainly, among the multitudes of neurasthenic patients who have improved, temporarily or permanently, under Dr. Weir Mitchell's treatment of over-feeding, with rest in bed, there must have been many of the so-called lithæmic class, if this class is anything like so numerous as is believed.

To conclude, I would express as my provisional opinion that the interests of medical progress would be best served if we avoided for the present the term lithæmia altogether, studying on the one hand, as if *de novo*, the causes which lead to a precipitation of urates in the urine, and observing, on the other, to see whether the nervous symptoms, the dyspepsia, etc., occurring in the descendants of gouty patients, are essentially different from the neurasthenias and dyspepsias in patients who cannot be suspected of the gouty taint. At the same time, whether their explanations are right or wrong, the extremely important service which such observers as Murchison, DaCosta, Draper, and others have done in showing that some close connection exists between disorders of general nutrition and a great variety of symptoms which had hitherto been studied too much in detail alone, is worthy of the fullest recognition.

PERITYPHLITIS.

BY J. W. COWDEN, M.D., ROCK ISLAND, ILL.

[Read before the Iowa and Illinois Central District Medical Association, October 9, 1883]

Mrs McF., a resident of Rock Island, Ill., born in Wales; 35 years of age; the mother of three children; weight 135 pounds; began complaining of pain in the right iliac fossa in the fall of 1882. Her family physician, Dr. Thomas Galt, diagnosed the case as neuralgia, and gave her prescriptions which he said would remove the trouble. The pain continued throughout the winter, the patient herself during that time being conscious of a swelling or induration on the right side. About the 10th of March, 1883, she was compelled to take to her bed. The doctor, then visiting her from day to day, told her "there might be danger of an abscess," and immediately set in operation vigorous and active measures for "scattering" the tumor. These measures consisted in kneading and rubbing, at the same time using a liniment to assist in the dispersing process, the doctor telling the patient "the tumor could be scattered by persisting in this method of treatment," he himself participating in the work. With the addition of hot fomentations, under the doctor's instructions this plan of treatment was faithfully carried out by the patient's friends until the 24th day of May, when he made his last visit. He then told her "the tumor was scattered; that he was going away for awhile, but would leave medicines to do until his return; that he would expect to find her well by the time he got back, and that it would not be necessary during his absence to call in another physician."

Three days after the doctor left I was called to see this patient, and found her lying upon her back, the right leg flexed upon the thigh, and the thigh drawn up on the pelvis, in which position she had lain for seven weeks without being able to straighten the limb or to be turned over in the bed. There was a large bed-sore, a most formidable complication, on her back. She was having two or three chills a day, followed by fever and profuse perspiration; pulse 150, and temperature 105°. Had not taken any nourishment for several days. She was so much emaciated that the bones looked to be almost protruding through the skin. I told her husband that she was suffering from perityphlitic abscess, and was then almost in a moribund condition, and without an operation for her speedy relief she must soon die; that in her present exhausted condition the chances were very much against her getting well after the abscess was opened; that she might die, too, during the operation; but as an operation was the only means of relief for her, we must either abandon her to her fate, or, "as a forlorn hope," give her this last chance.

After short deliberation, he told me to operate; but as the doctor in charge of the case three days before I was called had told them all danger had passed and that she was then getting well, I requested that some other physician be called in consultation. In accordance with this request, Dr. S. C. Plummer was sent for. The doctor, on his arrival, fully concurred in my opinion. An ounce of whisky was then given, and in twenty minutes thereafter the doctor administered the ether. I then divided the integument and fascia for about two inches in the direction of and parallel with Poupart's ligament, and proceeded to open the abscess by dividing the superimposed structures upon a grooved director until the transversalis fascia was reached, in which I made an opening sufficiently large to admit the forefinger. The abscess then discharged what was estimated at the time to be about three pints of horribly fœtid pus.

On regaining consciousness, after the ether, she was in a state of extreme collapse, and was taken with violent retching, borborygmus, and occasional vomiting of glairy mucus, so that I was obliged to remain with her for several hours. I administered whisky by the mouth, and gave her morphiæ sulphatis, gr. ss.; whisky ℥i, hypodermically. A mustard sinapism was applied over the epigastrium, and hot applications to the extremities. After several hours of extreme suffering, the retching ceased, reaction came on, and the patient soon expressed herself as being greatly relieved. Her back and hips were then supported by a circular air cushion, which afforded great relief by removing all pressure from the bed-sore. She was then put upon an analeptic and supporting treatment, milk punch was taken freely, milk and eggs beaten together, milk and lime-water, animal broths, and the beef-peptinoids.

The cavity of the abscess was washed out daily for ten days with carbolic acid water, solution 1 to 80, after which it was washed out twice a day with tepid water. A rubber drainage tube was inserted, but after a few days, this becoming intolerable, a horsehair drainage tube was used in its stead. This seemed

to answer every purpose, the drainage taking place by capillary attraction. This tube was removed twice every day, thoroughly cleansed by washing in carbolic acid water, and again replaced. In about seven weeks from the opening of the abscess all discharge had ceased, the drainage tube could no longer be replaced, the patient, up about her apartments, was improving rapidly, and all the symptoms pointed to a speedy recovery. Some days after this, however, she became restless, her appetite diminished, her wonted cheerfulness gave way to an anxious expression, and she soon began to complain of deep-seated pain in the cæcal region. I then became satisfied that fresh trouble was to be expected, and at once proposed administering ether and re-inserting the drainage tube. To this proposition she would not at first consent, her previous experience with the ether having caused her to believe if she took it again she would die. In a short time, however, she made up her mind to be governed by my advice. She had no fears from the operation; her great dread was the ether. Dr. Plummer not being at hand, at the patient's request, Prof. W. F. Peck, of Davenport, Iowa, was called in. Ether was again administered, and Prof. Peck re-introduced the drainage tube. A small quantity of matter was then discharged, the patient soon regained her appetite, and all the other unpleasant symptoms rapidly passed away. This tube was allowed to remain for three days, when I removed it, cleaned it thoroughly, and again replaced it. It was afterwards taken ont twice daily, the cavity well washed out, and the tube again re-inserted. On the 16th day of August a small fæcal concretion came away, on the 18th two more, after which the discharge soon ceased and the cavity rapidly closed. At this writing, October 4, 1883, the patient has entirely regained her former good health, all trouble in the cæcal region being entirely removed.

Perityphlitis usually consists of a circumscribed inflammation in the connective tissue about the cæcum, its most striking characteristic being a circumscribed swelling, or, rather induration, in the neighborhood of the cæcum, situated above and in close proximity to Poupart's ligament. The tumor, immovable, deep seated, and tender on pressure, may generally be discovered within forty-eight hours after the onset of the disease, by palpation of the right iliac fossæ, or by digital exploration of the rectum. There are cases, however, which are not thus circumscribed, in which perforation of the cæcum, or appendix vermiformis, is rapidly followed by fatal septic-peritonitis. The following symptoms are generally present: abdominal tenderness and pain in the right iliac region, usually occurring suddenly, and attended with the ordinary symptoms of fever which mark the onset of suppurative, phlegmonous inflammation; nausea and vomiting; acute pain and tenderness in the cæcal region; frequent pulse and high temperature, the thermometer, in some cases, reaching 105°. The pathological condition in perityphlitis cannot always be determined; it is the result, in many cases, of a diseased condition of the appendix vermiformis; it is due, in most cases, "to foreign substances, 'usually gall stones,' or fæcal concretions, entering the appendix vermiformis;" in others, "to impaction of fæces in the cæcum;" "it has occurred after unusual muscular exertion;" "it has followed the intestinal lesions occurring in continued fever," whilst, in other cases, no adequate cause could be discovered. The proximate cause of the characteristic induration, however, points to a plastic inflammation of the connective tissue adjacent to the cæcum; this inflammation often following upon a diseased condition of the appendix vermiformis. The large number of cases terminating by resolution, without eventuating in abscess, some as early as the fifth, others at the eighth to the fourteenth day, while others again may go for many months, being, to my mind, at least, confirmatory of some lesion of the appendix. If left to itself, perityphlitic abscess does not always terminate unfavorably; it may open into the bowels, into the bladder, or externally, and the case progress to a favorable termination after that. However, the rule, adopted by Gross, Parker and Sands, for opening the abscess by a free and early external incision, is not invalidated by the occurrence of exceptional cases.

Dr. Henry B. Sands, in a very able article published in the *The Encyclopædic Index of Medicine and Surgery*, reports twenty-six cases of perityphlitis as having fallen under his observation.

"Of these, twenty-two cases were observed in males and four in females. The youngest was nine years of age, and the oldest fifty-four. Of the rest, ten were between ten and twenty; seven between twenty and thirty; two between thirty and forty, and five between forty and fifty."

The doctor makes four divisions of his cases: *First*, ten cases which terminated in resolution, without evidence of suppuration; *second*, three cases of abscess terminating in spontaneous recovery, two of them opening into the bowels and one opening into the bladder; *third*, eleven cases treated by operation; *fourth*, two cases in which the abscess terminated fatally, without discharging its contents.

In the cases treated by operation, "fluctuation occurred in four cases." The date of the operation in one case is not recorded; in the other cases, the abscess was opened in one on the ninth day, two on the twelfth, one on the thirteenth, one on the fifteenth, one on the seventeenth, two on the twenty-first day, and one at the end of the ninth week, respectively. "The last-named case," says Dr. Sands, "in which the operation was so long delayed, terminated fatally by septicæmia. At an earlier stage of the disease, and before fluctuation was evident, I proposed an exploratory incision, but the patient refused to submit to it. When, at last, the abscess pointed over the middle of the crest of the ilium, it had already burrowed extensively and acquired extraordinary dimensions. After being opened it continued to discharge very copiously, and, in spite of the employment of antiseptic injections, septicæmia occurred and carried off the patient. The case is instructive as illustrating the danger of delay, for it is the only one operated upon in which death followed the operation. Had the abscess been opened at an earlier period, a fatal termination would probably have been averted."

"In the early stage of the disease it may be impossible," says Dr. Sands, "to discriminate between the cases that are going to terminate by resolution and those that are to end in suppuration; the latter may usually be distinguished toward the close of the second week by the generally unfavorable condition of the patient, who seems to be growing worse instead of better; whereas, when resolution is about to take place, the later course of the disease is comparatively mild and favorable. In one remarkable case, wherein the affection continued for many months and ended without suppuration, the combination of symptoms was never such as to demand surgical interference, although on two occasions I was nearly persuaded to undertake an exploratory operation."

In all of the eleven cases reported by Doctor Sands, except the first, the abscess was found and opened. "In the one in which the incision was made on the ninth day, no abscess could be discovered, although the knife was carried through the fascia transversalis, and the hypodermic needle thrust in various directions, in the hope of finding pus. After the operation the patient grew worse and his life was despaired of, when, eleven days later, an abscess broke and discharged its contents through the wound. Perhaps, in this instance, the operation was serviceable by dividing dense structures, which might have offered resistance to the progress of matter toward the external surface, but it would, of course, have been more gratifying if an abscess had been reached at once. Usually, a perityphlitic abscess remains of moderate size until about the end of the second week, and by deferring an operation until it is ripe, we shall find the deeper textures consolidated and agglutinated by plastic lymph, and, therefore, less liable to be infiltrated by the fœtid discharges, which, after incision, often cause more or less sloughing of the margins of the wound. On the other hand, the danger that the abscess, if unrelieved, may rupture into the peritoneal sac must not be forgotten. * * * * Doctor Wiener was called to see a gentleman who had been ill for six days with perityphlitis. The characteristic tumor was present in the iliac fossa, and the case being regarded as one of abscess, arrangements were made to open the latter on the following day. During the night, however, in consequence, it is supposed, of some incautious movement made by the patient, rupture into the peritoneum took place, and death ensued ten days afterward. The bursting of the abscess was indicated by a disappearance of the tumor, and by collapse, followed by the usual symptoms of peritonitis. I believe such an event as this is very rare, but the possibility of its occurrence must make us watchful and anxious until the crisis is passed. Everything depends on an exact diagnosis and on an early recognition and treatment of existing abscess, and I would suggest a far more frequent employment of the aspirator, as affording the most reliable test at our command for purposes of diagnosis."

Perityphlitis may occur more than once in the same subject. I find, in the cases reported by Dr. Sands, one patient had a second attack, which terminated by resolution thirteen months after a successful operation for abscess. In another patient there occurred no less than three attacks of perityphlitis within a period of two years, the last one only eventuating in abscess. In another case, an abscess formed two and a half years after an attack, which terminated in resolution. "Such cases should teach us to be guarded in our prognosis respecting the liability of a recurrence of the disease."

"It is generally assumed that when an abscess results from perforation of the appendix, the matter is contained in the peritoneal sac, a portion of which is shut off from the rest by adhesions between the intestines, the parietal peritoneum, or the omentum. * * * * Such a mode of origin is quite exceptional, and when, in consequence of intestinal perforation, fæcal matter escapes directly into the peritoneal cavity, the result is almost invariably a diffused septic inflammation of the peritoneum, ending in speedy death. Pathological anatomy has shown the possibility of another mode of abscess formation, which I believe to be far more common. The vermiform appendix, before becoming perforated, may contract adhesions to the peritoneum lining the iliac fossa, on which it usually rests. Consequently, when the coats of the appendix have been destroyed, the ulceration extends through the opposed layer of the peritoneum in such a manner that the fæcal matters, instead of entering the serous sack, gradually pass into the loose connective tissue which lies outside the peritoneum, and there set up suppurative inflammation. The pus, as it accumulates, may burrow behind the cæcum and ascending colon; or it may descend behind the peritoneum into the pelvis; or, as most often happens, it may occupy more or less completely the iliac fossa. In the latter case, the serous membrane, which is here very loosely adherent to the iliac fascia, will be detached and deflected toward the median line, carrying with it, in the same direction, the cæcum and the small intestine. Here there will be little danger of wounding the peritoneum while opening the abscess, provided the operator avoids the upper and inner margins of the tumor, where the serous membrane forming the boundary of the abscess is reflected upon the anterior abdominal wall. Of course, in the event of an erroneous diagnosis, grave accidents might occur, for an incision which, in the case of an abscess, would simply enter the suppurating cavity, might otherwise penetrate the peritoneal sac, and perhaps also involve the intestine. The aspirator, as has been stated, offers the best safeguard against such a blunder, and should invariably be employed in doubtful cases."

Of the two cases which terminated fatally, "without the abscess discharging its contents either internally or externally," the first "was seen in consultation with Dr. Smith Ely, of Newberg." The patient was a gentleman forty-eight years of age, who, after having suffered for some time with the symptoms of inflammation in the region of the cæcum, was seized with general peritonitis. At the time when he came under my observation, I found the abdomen greatly distended, but could discover no tumor in the iliac fossa, or in the rectum. He declined to submit to the usual exploratory operation, but allowed me

to cut through the skin and the thick, subcutaneous fat, and to insert the needle of a hypodermic syringe into the deeper tissues. This was done with a negative result. Death occurred from peritonitis, and a post-mortem examination revealed an extensive abscess behind the cæcum and ascending colon, reaching as high as the under surface of the liver, and communicating with the intestines through an ulcerated opening in the posterior wall of the cæcum, The abscess was filled with pus and blood, and did not open into the peritoneum. The vermiform appendix was intact." . . . .

"The second patient, a gentleman forty years of age, I saw in consultation with Drs. Rodenstein and Otis. The history of the disease pointed clearly to perityphlitis, but there was no tumor. Digital exploration of the rectum failed to discover any swelling, but detected slight tenderness high up on the right side. On the fourth day the patient became somewhat delirious, and on the sixth day, he had a convulsion. From that time until his death, which took place on the sixteenth day, the symptoms were those of cerebral inflammation, the patient dying comatose. A post-mortem examination discovered the changes in the brain characteristic of purulent meningitis; and the disease, in this case, seemed to be pyæmic, for, on opening the abdomen, an abscess containing eight ounces of fœtid pus was found situated in the lumbar region, behind the cæcum and ascending colon. The abscess communicated with the vermiform appendix, which was the seat of a double perforation. No tumor existed in the iliac fossa. There were no evidences of peritonitis except the presence of some adhesions connected with the appendix. These two cases show that a perityphlitic abscess may be situated altogether behind the colon, and suggest the propriety of inserting an aspirating needle through the posterior wall of the abdomen, when the symptoms of perityphlitis are present without the development of the usual iliac swelling. Should matter be found, it could then be evacuated by an incision like that usually made in the operation of colotomy."

Dr. Thos. F. Rochester, of Buffalo, N. Y., in the thirtieth volume of "Transactions of the American Medical Association," reports a case of perityphlitic abscess discharging into the bladder and rectum, with pathological specimen. The doctor says: "In June, 1875, I was consulted in my office by Michael Hays, 28 years of age. He had a swelling in the right iliac region, tender to the touch, and painful all the time, and especially on motion. It appeared to be deep-seated and circumscribed, not very prominent, and about as large as an orange. Hernia and bubo being excluded, it was a question between iliac or perityphlitic abscess. I called upon him the next day with Prof. J. F. Miner, prepared to make at least an exploratory operation. To our surprise, he informed us that the tumor had subsided, and that he was passing pus and fæcal matter by his urethra. Of this he gave us ocular evidence. As this vent had occurred, it was decided to watch the case. Tonics were prescribed and rest enjoined. He remained under observation for six months, and was able to walk about, and even do light work. In January, 1876, he went to Bellevue Hospital, New York, and consulted Dr. Gouley and others, but received no encouragement to undergo an operative procedure. He returned to his home, and was seen by different physicians. He died September 20, 1878.

"Dr. John Boardman, his last attendant, invited me to a post-mortem examination, which he conducted with great care and skill, and to whom I am indebted for the pathological specimen shown. The body was extremely emaciated. There was no swelling in any part of the abdomen. In the right iliac region the intestines were firmly adherent to each other and adjacent parts. It was difficult to isolate the caput coli. The enlarged appendix was firmly attached to the anterior abdominal wall, and appeared to have emptied itself into an abscess, probably formed by its discharge. The abscess contained about two ounces of fæcal matter and pus, and communicated by a large orifice with the bas-fond of the bladder, and by another with the rectum, which was drawn over to the right iliac region; there was a small channel opening into the caput coli. The abscess had, in fact, four openings, two of ingress and two of egress, and yet so firm were the adhesions surrounding it, that there was no escape of its contents into the peritoneal cavity. It is probable that an early operation would have been successful. It is not impossible that a very late one might have been, even some time after the discharge into the bladder and rectum had taken place. As none of the organs were found diseased, it is probable that the man died from exhaustion; or, possibly, from purulent absorption. He lived for over three years in a most pitiable state, after the abscess had established for itself partial outlets; and from the information obtained by the post-mortem examination, it is much to be regretted that his urgent and repeated appeals for a surgical operation were not complied with."

The doctor reports twenty-three cases of perityphlitic abscess as having occurred in his practice. Most of these terminated fatally; a post-mortem examination was had in every instance. The doctor says: "They have generally been caused by disease and perforation of the appendix vermiformis. It is my belief that, in the great majority of cases, this appendix is in a diseased condition before it receives the foreign body which causes subsequent ulceration and perforation. It is described by Rokitanski as of catarrhal character, causing general enlargement, and dilatation of its orifice and canal. It may become very thick or very thin in its walls. In the latter case it sometimes shrivels and shrinks entirely away. The foreign bodies are usually gall-stones."

I find, in *The College and Clinical Record*, September, 1883, copied from the *Med. and Surg. Rep.*, August, 1883, the following case, reported by Dr. F. M. Brundage, of Coningham, Pa.: "Kate G., aged 70, was attacked in August, 1877, with pain in the right iliac region, and constipation. The cause assigned was excessive indulgence in huckleberries.

"After the symptoms mentioned had continued one week I was summoned, and detected a fluctuating tumor which occupied the entire iliac fossa. In

four days an extensive opening formed in this swelling, and a large quantity of stinking pus and huckleberry seeds was discharged. On the seventh day, the finger was passed into the ilium, through the ilio-cæcal valve, and into the cæcum. Fæcal matter passed daily through the opening until it had nearly healed. Cicatrization was complete in eight weeks from my first visit.

"*Treatment.*—The patient was placed on her back, with the right side somewhat elevated and the right leg flexed. She was fastened in this position by straps. The diet was composed of bread and milk and beef-tea. The fistula was washed with carbolized water several times daily, and was dressed with charcoal poultice. The rectum was evacuated daily by the finger.

"After enjoying good health for five years from the date of my attendance (with the exception of a hernia in the neighborhood of the cicatrix, which formed in about one year), Mrs. G. succumbed to an attack of cholera morbus."

Considering the frequency of perityphlitis and the meager account of its different phases in our standard text-books upon the subject, together with the fact that many cases are overlooked or not properly understood by the busy practioner, I have, therefore, in order to present the subject comprehensibly under the present state of medical knowledge, quoted largely from the foregoing papers without fear of trespassing upon the time and patience of the reader.

Although I had not seen Dr. Sands' article at the time I operated upon my patient, yet the operation was performed essentially in the manner as recommended by Dr. Parker and adopted by Dr. Sands.

I think it advisable, as recommended by Dr. Sands, "to insert the finger after opening the abscess, in order to ascertain the extent of its cavity, and detect, if possible, the presence of foreign bodies or fæcal concretions. These, if found, should be removed in order to avoid future tronble."

MEDICAL PROGRESS.

MEDICINE.

RHEUMATISM.—Under this head the December number of the Proceedings of the Medical Society of the County of Kings has four distinct articles. Dr. Benj. Edson describes a case of the acute form treated by sodium salicylate grs. x every three hours, and relieved in two weeks time. It returned in a sub-acute form, and proved very obstinate, not being relieved by the sodium salicylate. Chorea developed, and the symptoms were finally subdued by ℞. ext. cimicifugæ fl. ℥ss., potass. iodidi grs. v, four times a day.

Dr. H. A. Fairbairn reviews the results of treatment of acute rheumatism, taking from the English journals the reports of between four and five hundred cases treated by salicin and salicylate of sodium, all being recorded hospital cases. The conclusions drawn are that they (these drugs) make comfortable an otherwise painful and distressing ordeal; that the duration of the disease, as a rule, is not shortened by it, and the heart not protected; that it fails entirely in some cases. The dose varied from ℥iss to ℥ij in divided doses (of sodium salicylate) during the twenty-four hours. By some ℈j doses were given every two hours or hourly, until relief was afforded. Accidents having occurred during its administration, and sudden death having followed, the recognition of the presence of a powerful drug, and the consequent care necessary in its use, would seem to make this last dose a hazardous one. One observer recognizes a distinction between the natural and the artificial salicylic acid; the latter being made from carbolic acid, and likely to contain it in excess, ascribes the depression and other bad symptoms to this cause, the same symptoms would follow the administration of grs. vj of carbolic acid. This observer (Dr. Latham, of England) has given the preparation derived from natural sources in 60, 70, and 110 grain doses, with no unfavorable symptoms except slight cerebral excitement. Dr. Maclagan prefers salicin in ℈i to ℈ij doses hourly for six hours, then every two hours. In two cases given, improvement was marked in twenty-four hours, and the patients convalescent in four days. Salicin is preferred, as not producing depression, and therefore not prolonging convalescence. The drug must be given in large doses, so as to thoroughly saturate the system. The use of methyl salicylic acid, or oil of wintergreen, is reported in ten cases at St. Luke's Hospital, New York, as employed with good results in m. x to m. xv every two hours. Here Dr. Fairbairn makes a point of dwelling on the importance of looking to the activity of the eliminating organs when using such powerful drugs. The blister treatment, applied over the heart and about the joints, has sixty-four cases recorded to its credit as cutting short the fever, relieving pain, and having no heart complications. Dr. Fairbairn found relief given by large doses of the tincture of the chloride of iron, in weak and anæmic cases, where neither the alkaline nor salicylate treatment appeared to do good. Dr. Craig, of Jersey City, reports benefit in forty-eight hours, and a cure in five to six days, from the use of the syrup of hydriodic acid in ℥ij doses every two or three hours until relief, then ℥j three times daily. Dr. Flint, of New York, allowed a number of cases of acute rheumatism to pursue their course without any treatment. They all recovered, the mean duration of the disease being a little under twenty-six days. Our most approved method of treatment gives about the same average.

Dr. J. E. Richardson writes enthusiastically in favor of the treatment of acute rheumatism by the salicyl compounds, giving a brief analysis of thirty cases so treated. He used a freshly prepared solution of salicylic acid and bi-carbonate of sodium, with glycerine and water as a vehicle, so that each dessertspoonful represents ten grains of the salicylate of sodium, the carbonic acid evolved making the mixture more agreeable to the palate and stomach, this dose to be repeated every three hours, making eighty grains to the twenty-four hours. In several cases there was a decided cumulative effect; in but one, however, was this effect toxic. The former impurities of the drug as made from carbolic acid, have

now been reduced to the minimum, and it is as reliable as any made from oil of wintergreen. Local treatment by cotton wool and hot fomentations and the use of opiates, was not neglected. There was no hyperpyrexia in these cases, and in nearly fifty per cent. the temperature did not exceed 102°. Subsidence of pyrexia occurred, on the average, 3.1 days. In fifteen cases it had become normal at the end of forty-eight hours. The average duration of joint pain was 4.5 days. The average time in which patients were kept under observation was 10.1 days, this being the time they were able to resume their employment. Heart complication occurred in one case; this was a case of endocarditis. He believes the salicyl treatment lessens the tendency to heart disease, probably through the reduction of temperature and the destruction of the rheumatic poison. Relapses took place in five cases while the patients were still under tolerably full doses of the drug. Dr. Richardson draws the following conclusions:

1. The more acute the case the more marked the relief afforded by the salicyl compounds.

2. If beneficial effects are to result from the use of the drug, they should be observed within forty-eight hours.

3. If the remedy is administered early in the disease, and in not too large doses, the tendency to heart disease is greatly diminished.

Dr. W. B. Chase, in considering the "Prophylaxis of Rheumatism," recognises first the direct transmission of the rheumatic diathesis; then its prevalence in the temperate zone and under the meteorological conditions of humidity with a low temperature. Consequently, his prophylaxis is introduced by directions of how best to avoid exposure, and the wearing of proper clothing, such as silks and woolens next to the skin. A proper care of the emunctories, as bathing for the skin to keep the perspiratory glands in good working order, and attention to the urinary secretion, is dwelt upon. Alcoholic drinks are assumed to be a prolific cause of rheumatism, but in what way is not clearly defined. The undue formation of lactic acid in acute rheumatism is recognised as the cause of the hyperacidity of the secretions, and Bartholow's three types are given, viz.: 1st, active, sthenic cases, in persons of robust health, youth or early adult life. Treatment: Salicin and its compounds.

2d. Asthenic cases in the anæmic and debilitated, often the young. Treatment: Tr. ferri chloridi.

3d. Obese persons and beer drinkers, with flabby muscles and acid indigestion. Treatment: Alkalies.

Probably most persons of rheumatic antecedents will derive benefit, and thereby reduce the liabilities to its constitutional development, by more or less frequent use of natural alkaline and sulpho-alkaline waters. Buffalo lithia water is believed to exert a successful prophylaxis with some.

Marsh Mallow in Palmar Psoriasis.—Dr. F. C. Berry records in the *Practitioner* that after trying in vain to relieve a typical case of psoriasis in a man 65 years of age, who had suffered from it for the past eighteen months, by the use of Fowler's solution internally, and the local application of soft soap, and an ointment of chrysophanic acid and vaseline, oil of cade and vaseline, the ammoniated mercury ointment, and Wright's liquor carbonis detergens, he turned his case over to an old woman who applied the marsh mallow ointment and relieved the intolerable itching and consequent irritation by the first application, and in a month the skin of the hand had almost regained its natural appearance. No other treatment was used except the washings with soft soap. The disease appeared again in a short time, but a fresh application of the ointment cured it at once.

In this case there was no history of syphilis. In the palm of the right hand the integument was hardened and thick, and from off its surface glistening white scales could easily be removed. In some places it was corrugated and fissured. Extension of the fingers would cause the cracks to bleed. The dorsal surface of the thumb was also affected. The ointment was made by cutting the fresh leaves into small pieces, stirring them together with lard and boiling the mixture for half an hour, after which process it is strained through muslin or through a common kitchen strainer, and is then ready for use.

Transfusion of Blood by Hypodermic Injection.—Dr. Paladini reports (*Gaz. Med. Ital. Prov. Veneti.*) an interesting case of successful injection of blood into the subcutaneous cellular tissue of the abdomen in a woman suffering from profuse menorrhagia. R. S., pluripara, aged 48, was reduced by menorrhagia to a profound degree of anæmia. On August 4, the loss was so great that the patient's state became most alarming. Transfusion of blood was urgently indicated; no apparatus for this being at hand, it was determined to inject the blood by means of an exploratory trocar and an ordinary syringe into the subcutaneous cellular tissue of the abdomen. The blood, taken from the husband's arm, was heated to prevent coagulation. The trocar was inserted about four fingers' breadth to the left of the umbilicus, and pushed well in so as to somewhat break up the meshes of the cellular tissue, and thus secure room for the blood to be injected. The stilet being withdrawn, an elastic tube was fastened to the end of the canula; the blood was taken up by an ordinary metal syringe (about 90 cubic centimeters capacity), its nozzle being made fast to the elastic tube, and injected into the subcutaneous cellular tissue, where it appeared as a lump about the size of an egg. Two syringefuls were thus injected. The patient felt no pain; and after two hours the swelling had entirely disappeared. No abscess or other ill effect followed, a slight ecchymosis only for a few days marking the site of the injection. On the next day the patient was much better, and began to take and retain nourishment and sleep well; for some days before there had been constant vomiting, and no sleep. The lax connective tissue lends itself admirably to the transfusion of blood, and to its rapid absorption. The quantity of blood might be easily increased by repeating the injection in two or three different places, to 300 or 400 grammes (about 10½ or 14 ounces). This method is free from the dangers of venous or intra-peritoneal

transfusion, and is most easily done.—*British Medical Journal.*

AN EPIDEMIC OF ERGOTISM.—The *Deutsche Med. Zeitung* gives a detailed account of an epidemic which occurred in the autumn of 1879, in Ober Hesse, near Frankenberg, of which the *Medical Press* furnishes an extract. According to official returns 200 persons were attacked, but others say 500. The ergot was present in both rye and barley, and was computed to amount to 2 per cent. of the bulk. The bread baked from the impure grain was dark, rather blue, and of a peculiar odor; rather sweet to the taste, but not disagreeable.

The first symptoms of poisoning appeared in children even after five days' use of the bread. Weakly persons were affected much more quickly and easily than those who were strong—the latter often retaining their health after months' use of impure bread. A prodromal stage was often observed of several weeks' duration, in which a general feeling of *malaise*, weakness, headache and giddiness were present. In these cases loss of appetite came on. In some cases this was replaced by rabid hunger. The temperature rose slightly in the evening. The pulse was soft and but little accelerated.

Cramps constituted a characteristic symptom, usually confined to the hands and feet, sometimes extending over the whole body, appearing early and disappearing late, involving the flexors of the fingers and toes and the extensors of the arms and thighs. The great toes were generally extended. Shortness of breath, pain in the pericardium and globus, indicated spasm of the diaphragm and œsophagus. Abortive cases ran from fourteen to twenty-one days; mild cases relapsed frequently. Severe cases frequently ended in epileptic attacks, in some as early as the eighth day. A few weeks later, psychical disturbances arose, viz.: extreme restlessness, mania and stupor. Locomotor ataxia was always present, last in order of time. Sensibility undisturbed. Sole and skin reflexes were normal. The tendon reflexes were almost invariably absent, and some cases were observed where they had not returned after some years. The epidermis was raised in large blisters without inflammatory reaction, whilst, simultaneously, the patient frequently lost all the nails of the fingers and toes, and the hair of the scalp. Excretion of sweat was generally increased in the spasmodic stage, and miliaria often made its appearance. Eczema and boils were also frequently observed, as well as urticaria. In the severe cases, menses previously normal, ceased at the commencement of the illness, and did not return till health was re-established. Dysmenorrhœa came on in the slighter cases. Notwithstanding the fact that pregnant women repeatedly suffered severely, no case of abortion was observed. The muscular contractions were considered as due to a centric cause.

SURGERY.

NEW MODE OF TREATMENT OF FISTULA IN ANO.—Under this head, Dr. John Roche, in the *Medical Press*, recounts the frequent unsatisfactory results of the present modes of treating fistulæ, by stimulants, caustics, and the use of the knife. Dissatisfied with this condition of things, having to deal with several cases, and considering that division of the sphincter is not only unnecessary, but that its existence in its entirety should favor the healing process, if properly utilized, he treated his cases by keeping the bowels open with a sulphur aud senna electuary, a teaspoonful every night, and directed that at each stool the patient should throw into the bowel some tepid water, in which was a little soap dissolved, and when the sitting was completed that the end of the bowel should be well washed with the same fluid. The fæces were, by this means, carried quickly and easily through the gut contiguous to the fistula, and there was the nearest thing to a safeguard against the foul discharge entering the internal opening of the fistula, were such to exist, or lying in a decomposing state so close to a sore as to prevent its healing. His anticipations were realized in every respect, and the cure seemed marvelous to him. In cases where there was considerable false membrane lining the fistula, he used lint shreds dipped in acetum cantharidis, as a stimulant, and refers to several cases so relieved.

OPHTHALMOLOGY AND OTOLOGY.

A CASE OF CYSTICERCUS IN THE VITREOUS BODY.—G. Souquières reports this case as occurring in the clinic of Prof. Dor; (*Lyon Medical*). A young woman, 23 years of age, gave the history of noticing the appearance as of a cloud of dust, before her right eye, on getting up one morning. This cloud, however, was not sufficient to prevent her seeing minute objects. After continuing unchanged for eight or ten days, vision seemed to be gradually failing. In the daytime, muscæ volitantes were present. Medical advice was sought, and the condition considered as due to a nervous affection. A month later she saw a round, black spot, which was clearly defined, vision being more imperfect. In the darkness, and when she closed her eye, she noted a brilliant, fixed, and persistent point. At the end of two months the black spot had gradually become translucid from the center towards the periphery. At one point the patient observed a marked opacity, which elongated and shortened itself, and which she compared to a leech. By tapping the eye-ball she said she could displace the leech. Vision becoming more and more feeble, she sought the advice of M. Dor, who found a cysticercus, adherent, as he supposed, to the inferior internal portion of the retina. On her second visit he found the cysticercus detached and floating in the vitreous humor. An operation was performed for its extraction, which resulted in the exit of a specimen of the cysticercus. There was no discharge of the vitreous humor, and but insignificant hæmorrhage. The resulting cicatricial tissue caused an opacity, and the retina was almost completely detached at that point.

THE PREVENTION OF BLINDNESS IN CHILDREN.—The following excellent popular directions for the prevention of the frequent form of blindness arising from the destructive purulent ophthalmia of newly-

born infants, is being published and diffused by the Society for the Prevention of Blindness (England): "One of the most frequent causes of blindness is the inflammation of the eyes of new-born babies, a disease which can be prevented and always cured. In almost all blind schools in England and on the Continent, a third, and even more, of the children's blindness is caused by the neglect and unsuitable treatment of this disease. In the Wilberforce School for the Blind at York it is said that out of 89 pupils, 37 are blind from this cause; and several eminent oculists state that half the blindness in Europe is due to this inflammation of the eyes of new-born babies. This frequent blindness is largely owing to the general ignorance of mothers, and to the unpardonable neglect of the midwives, nurses, and others who have charge of the infants in their earliest days. In many cases, these persons prevent resort to skilled medical assistance, in order to try some unsuitable domestic remedies, until it is too late, even by the most skillful treatment, to save the child's sight. Although the disease appears sometimes in a very mild form, it may still, without some suitable treatment, have an unfortunate issue; but, in most cases, the disease takes a more determined character, and then, if left to itself, it may develop with such rapidity that, in the course of a day or two, all hope for preventing blindness is lost. In general, newly-born babies seldom suffer from any other eye disease, and its first appearance is easily recognized by the redness, swelling and heat of the eye-lids, and by the discharge of a yellowish-white matter from the eyes. This dangerous and ruinous disease is always curable if treated at once. Immediately, on the first appearance of these symptoms, send for a medical man; and, until his arrival, proceed at once to keep the eyes as clean as possible by very frequently cleansing away the watery discharge. It is the discharge which does the mischief. The cleansing of the eye is best done in the following manner:

I. Separate the eyelids with the finger and thumb, and wash out the matter by allowing a gentle stream of tepid or warm water to run between them from a piece of rag or cotton wool held two or three inches above the eyes.

II. Then gently move the eyelids up and down in a circular way, to bring out the matter collected under them; wipe it, or wash it off in the same manner. This cleansing will take three or four minutes, and is to be repeated regularly, once every half hour at first, and later, if there is less discharge, every hour.

III. It must be borne in mind that sight or blindness depends entirely in these cases on the greatest care and attention to cleanliness. Small pieces of rag or cotton wool are better than a sponge, as each rag is to be used only once, and should be burnt immediately; sponges should never be used except they are thrown away or burnt after each washing.

IV. A little washed lard should be smeared along the edges of the eyelids occasionally, to prevent them from sticking.

V. The eyes should not be covered up by any bandage or handkerchief, as the discharge is thereby prevented from escaping.

VI. Fresh air and an equal temperature in the sick-room are absolutely required, and the eye, while suffering from the disease, should be kept carefully from all strong lights. Many cases of this disease might be entirely prevented by cleanliness of the eyes. (*a*) Immediately after the birth of the baby, and before anything else is done, the eyelids and all parts surrounding the eyes are to be wiped with a soft, dry, linen rag; afterwards, these parts must be washed with tepid water before any other part is touched. (*b*) Avoid exposing the baby to cold air; do not take it in the open air when cold; at any rate, dress the infant warmly and cover its head, because cold is also one of the causes of this eye disease.—*British Medical Journal.*

NEW INVENTIONS.

THE LITHOPHONE.—This instrument was invented by James McKenzie Davidson, M.B.,C.M., and is the result of his experiments with a rubber tube attached to the handle of a sound in an attempt to transmit the impression of the striking of the end of the sound against a calculus in the urinary bladder, to the ear. As described in the *Lancet*, the sound has a hollow cylindrical handle, open at the end like the mouth of a gun. The stem is of solid steel, and nickel plated, and does not differ from the short beaked sounds now in use. The handle is two inches and a quarter long, and hollow, with a diameter of half an inch. Externally, it has roughened longitudinal ridges, for convenience in manipulation. A piece of small and light India rubber tubing, about thirty inches long, is bent at one end, and the loop so formed is thrust into the tubular handle. The other end, fitted with an ivory or bone ear-piece (such as is used with the otoscope), is put into the ear, where it should remain fixed without requiring to be held. A binaural arrangement can be easily made of this, which would greatly intensify the note, and with it two persons can listen at the same time, and so verify the diagnosis with greater exactness. A modification of this is also given, in an egg-shaped bulb at the extremity, instead of the looped end, which barely exceeds half an inch in its widest diameter, and is squeezed into the tubular handle.

In its practical use, a particle of sand weighing less than $^1/_{500}$ of a grain, lying on cotton wool, was detected by hearing its contact with the lithophone; and Alexander Agston, M.D., Professor of Surgery at the University of Aberdeen, gives the details of a case where a man was admitted to hospital suffering from bladder symptoms which pointed to the probable existence of a calculus. The use of the sound by the sense of touch did not detect the stone, but by the use of the lithophone its presence was apparent to every one. The stone was crushed by the lithotrite, whose index gave it a diameter of three-eighths of an inch.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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CHICAGO, ILLINOIS

SATURDAY, DECEMBER 22, 1883.

INDEX MEDICUS.

SHALL THE INDEX MEDICUS BE DISCONTINUED?—Five years' publication of the *Index Medicus* has proved conclusively:

1. That the mere cost of production (per annum) is not less than $5,000.

2. That the maximum return from subscriptions at $6 per annum has not exceeded $3,600.

3. That the increase of subscriptions during the past two years has been merely nominal.

4. That the limited circulation permits no material return from advertisements.

As the publisher agrees with the editors that—in justice to themselves as well as to those whose generosity has already been severely taxed—the *Index Medicus* must no longer be dependent on voluntary contributions, the undertaking must either be abandoned or at once be placed on the business footing of an equally shared support.

Since there are scarcely 600 subscribers to whom the *Index Medicus* is, or seems to be, a necessity, the question to be determined is whether there remains a sufficient number of subscribers who are willing to continue their subscription at the requisite increase of price.

The editorial preparations requiring an immediate decision, subscribers are urgently requested to respond without delay to the questions submitted below. F. LEYPOLDT, Publisher,

December 1, 1883. 31 and 32 Park Row, New York.

Question 1.—If the future subscription price of the *Index Medicus* is fixed at $10 per annum, are you willing to renew your subscription for 1884 at that rate? 2.—Should not 500 subscribers renew at $10, will you be one of the 417 who are willing to renew at $12?

The foregoing statements and pertinent questions have been received in the form of a circular from the publisher of the *Index Medicus*, and are of sufficient importance to justify a careful consideration on the part of all our readers.

That the *Index* is a work of great value to all members of the profession who desire to know what is being published in the various departments of medicine, and where to find what is written on each important subject, there can be no doubt. To medical teachers and writers it is doubly important. It is a work that would be of much value to all such medical societies and institutions as are sustaining libraries, and are desirous of having early information concerning the contents of all new books, monographs, pamphlets, etc. Its publication during the last five years has not only done great credit to both editors and publisher, but has also added much to the credit of American medical literature on both sides of the Atlantic. The actual annual cost of producing the *Index Medicus*, as appears from the above statement, is about $5,000, which at the present subscription price, $6 per annum, would require only 834 subscribers, or an increase of 250 over the present list. More than this number should be immediately subscribed for the use of of medical societies alone. The Chicago Medical Society has recently appropriated $500 for the purchase of books and periodicals to furnish a medical section or department in the Chicago Public Library. We trust the able committee having charge of the expenditure of the money will not omit the *Index* from its list of purchases. Like the Library and Museum of the Surgeon General's office in Washington, the *Index Medicus* has become, in some degree, national in its character, and should command a feeling of national pride and active interest in its support. At all events, let the questions asked by the publisher be promptly considered in such a way as to double the present patronage of the Index and thereby secure its permanence, with some remuneration for the labor required for its preparation.

ORIGINAL INVESTIGATIONS.—In the JOURNAL of last week (No. 23) was completed the essay of Dr. A. T. Keyt, of Cincinnati, Ohio, embodying the results of a most ingenious and extensive series of experimental investigations concerning the relations of cardiac action to pulse-wave velocity, cardio-aortic interval, etc., and the modifying effects of both stenosis and insufficiency at the mitral and aortic openings. If the three chapters are read together, it will be found that they embody the results of one of the most ingeniously conceived, patiently executed, and logically considered series of experimental investigations concerning important physiological and pathological processes that has appeared in this or any other country during the last decade. All parts of the essay are copiously illustrated by cuts giving the actual

sphygmographic tracings and time markings, with remarkable accuracy. The more carefully and thoughtfully the essay is read, the more will its intrinsic value and interest be appreciated.

MEDICAL SERVICES TO TOWN OR COUNTY POOR, AND ETHICS.—Twice, recently, we have received communications complaining of the injustice of a system long in vogue in perhaps most of the States, by which the town and county authorities annually offer the privilege of serving the sick poor under the charge of the town or county, to the lowest bidder, on the same principle that they invite bids for provisions and clothing. In one of the recent cases brought to our notice, a board of county supervisors, after receiving bids from some half dozen doctors, some of them ridiculously low, awarded the contract to one of the number whose bid was higher than two or three others, thereby violating the very principle of the law under which they claimed to act. The other is from an esteemed correspondent at Tecumseh, Michigan, who says: "In the county of ———, State of Michigan, within thirty miles of its university, the worthy rulers of said county (supervisors) let out the job of medical attendance upon the poor to the lowest bidder in each town, village and township. The town of ———, in this county, has almost three thousand inhabitants. The contract physician for the poor, who, by the way, has practiced medicine in the town for thirty years, receives $19.50 per year for medical attendance, and furnishes medicine. If no bids were made, the supervisors would allow each physician half fees for whatever business he might do among the poor of the towns. Now, Mr. Editor, is there anything in the above asinine transaction contrary to the National Code of Ethics? or is it in accordance with the 'go as you please' code, of New York? Please give us some light."

We presume our correspondent, as well as most of our readers, knows that the National Code of Ethics makes no direct allusion to what is termed contract practice, either in regard to contracts with families, institutions, or corporations of auy kind. But in enjoining it as "a point of honor to adhere" to such rate of charging for professional services as may be adopted by the profession in any given locality, it of course indirectly prohibits all special contracts with families or institutions capable of paying for ordinary professional services. The clause in the Code which refers most directly to bestowal of professional services on public institutions is as follows: "Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded."

It would appear from the last clause quoted, as well as from some other clauses in the Code, that it is the *duty* of every practitioner, so far as his time and health will permit, to respond freely and cheerfully to the calls of all such individuals as are sick and actually too poor to pay for services. Consequently, any contract stipulating for the payment of fees for services to such poor individuals, is contrary to the plain inculcations of the Code. If the authorities of a town, county or city, seeing an unreasonable burden cast upon a physician or surgeon through protracted services to certain poor individuals or families, should voluntarily offer some pecuniary reward either from the public treasury or private resources, it may be accepted without hesitation. And we have known such compensations to be made more than once. But when paupers are actually taken charge of and gathered into "poor-houses" or other institutions supported either by public taxation or private charity, many considerations render it desirable to have the services of some one regular medical attendant; and yet it would be unreasonable to expect any one physician to hold himself in readiness to answer gratuitously all the calls that might come from a "poor-house" containing several hundred paupers. Such institutions cannot be ranked with those spoken of in the Code of Ethics as "*endowed* by the public or by rich individuals," but are by common consent classed as eleemosynary or charitable in character. And so far as any ethical question is concerned, a physician or surgeon could bestow his services upon the pauper inmates as gratuitously as upon any other "indigent individuals" outside of such institutions. But both justice and a wise public policy clearly demand that when public officers, whether supervisors of towns, commissioners of counties, or the municipal officers of cities, take charge of paupers and assume to provide for them out of the public treasury, they should from the same treasury make reasonable compensation for such medical services as their helpless wards may need. Every physician pays his share of the public taxes by which the public treasury is replenished, and there is no more reason why he should give his services gratuitously to paupers supported

from that treasury, than should the supervisor, the county commissioner, or any other citizen. Indeed, the correctness of the principle of action here claimed is everywhere conceded. But the important practical question remains, How shall the rate of compensation for medical services rendered to poor persons under charge of public authorities be regulated? Certainly not by farming out the service to the lowest bidder, as you would the privilege of furnishing meat, corn or clothing. First, because meat, corn, clothing, etc., are material products having a market value below which dealers in them will not bid. But professional services are not materials, the market value of which will necessitate a minimum limit below which the bidders cannot go. The qualifications and skill of a medical man or doctor, unfortunately, have no definite legal measure or weight, like a bushel of corn or a pound of meat. It is easy to see, therefore, that a superannuated doctor, whose age and infirmities are such that the paying part of the community give him very little to do, could afford to bid for the town pauper patronage at a very low figure. So, too, the young doctor just from the college which had given him a diploma after *eighteen months* of medical study, and attendance on two courses of lectures given on *beneficiary* tickets or scholarships. As his qualifications have cost but little either in time, money or mental discipline, and he has plenty of unoccupied time to spare, why should he not compete successfully by underbidding even the *old* doctor who attends to the medical wants of all the paupers in a population of 3,000, for $19.50 per year, and furnishes the medicines besides?

Then, there are a great variety of "doctors" who never saw the inside of a medical college—not even on a free ticket—who could easily underbid the young graduate just alluded to. We need not go further in illustrating the injustice to the sick poor and the unfairness to the profession involved in the common practice of accepting the services of the lowest bidder. Instead of such system, it is plainly the duty of all public officers having charge of poor-houses, or other institutions accommodating the sick at the public expense, to fix a moderate rate of compensation for such medical services as might be called for, whether rendered by one doctor or a dozen, thereby making the aggregate amount paid depend upon the actual amount of services rendered, which is the most correct and honorable rule for all parties. And if members of the profession would everywhere totally refuse to accept the invitations of city, town and county officers to bid for the pauper service, and at the same time actively exert their influence with the municipal and legislative authorities in favor of the more honorable and just method just indicated, it would require but very few years to cause its general adoption.

AN ERROR CORRECTED.—In the JOURNAL of December 8, (No. 22) page 655, in the review of the Report of the State Board of Health of Kentucky, the words "Dr. Holland being unversed in practical chemical analysis," should read, "Dr. Holland being versed in practical chemical analysis," etc. The reference is to Prof. J. W. Holland, of Louisville, Ky., who, for a number of years, was a teacher of chemistry, and is thoroughly informed in all its branches.

NUMBER SEVEN.—Several weeks since we found our supply of the *seventh* number of this journal insufficient to meet the demands of new subscribers who desired all the back numbers. The defect will be remedied in a few days, when the missing number will be sent to all who are entitled to it.

NEWS ITEMS.

MONUMENT TO PINEL.—In consequence of the memorial of the Medico-Psychological Society of Paris, the Municipal Council have commissioned M. Ludovic Durand to execute a statue of Pinel, which will be erected on the Place Pinel, near the Hopital de la Salpetriére. The design represents Pinel standing before a young girl, from whom he has struck off the chains binding her, the barbarous implement being in his hand.

HOW OUR MEDICAL BRETHREN ABROAD REGARD US.—It is astonishing in the present age to contemplate how rapid is the diffusion of knowledge. We receive medical periodicals published in Europe, to find that articles and cases published, as it would seem, only yesterday, have been reprinted and commented on, coming back to us sometimes in a foreign language which makes them read very oddly. But that is not all—our newspapers too receive the same attention, and the *Med. Times and Gazette* for Nov. 17 quotes from two Buffalo papers which give the details of two hospital cases, one of an amputation, and the other of a case of skin-grafting as performed by Dr. Roswell Park, at the same time that they give great praise to the operator and his qualifications. To be sure, in making these extracts, the editor seems disposed to be sarcastic in his comments, and the impression given is not of the most favorable kind.

Perhaps it is the diffusion of this kind of knowledge that has led a Dublin hospital surgeon, as referred to in the *Medical Press*, Nov. 14, to decide to spend the winter in San Francisco. The *Medical Press* tells us that he gave out the impression that he was to reside

permanently in this country, and consequently obtained numerous testimonials as to his capacity for surgical practice, from surgeons of eminence in Dublin. On leaving Dublin, this surgeon issued a lithographed circular to his patients, recommending a certain medical man by name to take charge of them, as he would continue the line of treatment hitherto pursued, and maintain a constant correspondence with San Francisco respecting the progress and treatment of the patients transferred to him. The *Medical Press* criticises severely this circular, and the fact of obtaining testimonials for a temporary absence, which was understood to be meant to be permanent.

SOCIETY PROCEEDINGS.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

[Section for Clinical Medicine, Pathology and Hygiene.]

ALBERT N. BLODGETT, M.D., SECRETARY.

November 14, 1883. Meeting called to order at 8 o'clock by Dr. George B. Shattuck, Chairman.

Dr. H. I. Bowditch requested the privilege of occupying a few moments for the purpose of warning the profession against a band of medical tramps, which at present infests Boston and its suburbs, and by every expedient endeavors to extract pecuniary aid from physicians. One of these impostors has suffered an amputation of the thigh, wears an artificial limb, professes to be a graduate of Harvard and the son of a physician, and presents plausible testimonials recommending him to the profession. The letters of commendation were found by Dr. Bowditch to be forgeries, and the man himself is a swindler. Another member of this band of conspirators is a young man, who is elaborately dressed and makes a favorable appearance, and whose habit is to call at the physician's house when the doctor is away. He represents himself to be the son of a celebrated physician of New York, who is a very intimate friend of the physician at whose door the young man is standing. He further states that he has been robbed of all his money and desires to borrow a sum, generally from three to five dollars, to aid him in reaching his home. Upon being informed that the doctor is not at home his eyes fill with tears and he appears to be in great distress of mind, and at length seeks to borrow the sum required of the person who comes to the door. If he does not succeed in this ruse, he asks the time at which the doctor will return, and is very particular *not* to return at that time. Another is a man of swarthy complexion, who pretends to be from India, but is probably an arrant cheat.

The regular business of the evening was then taken up. The first matter was the election of a chairman for the ensuing year, the present incumbent, Dr. G. B. Shattuck, who has filled this office for two years, having positively declined a reëlection. On motion of Dr. R. M. Hodges, seconded by Dr. A. L. Mason, the name of Dr. R. T. Edes was proposed, and he was unanimously elected. As Dr. Edes was not present, the Secretary was directed to acquaint him with the action of the Section.

Dr. G. H. Lyman then presented the first paper of the evening, entitled

TINNITUS AURIUM AND VERTIGO AS PROMINENT SYMPTOMS OF LITHÆMIA.

This was followed by a paper presented by Dr. J. J. Putnam, entitled

RECENT VIEWS CONCERNING THE DIAGNOSIS AND TREATMENT OF LITHÆMIA.

The Chairman alluded to the thoroughness with which the ground was covered by the two readers, and hoped that the discussion of the subject would be full and complete. The subject was then placed before the meeting.

Dr. S. G. Webber said that he had been very deeply interested in both the papers, but wished that in addition to the opinion of so many distinguished authors Dr. Putnam had given us his own views upon lithæmia at greater length. From his review we must conclude that we really know very little upon the subject; even observers, who have devoted much time to the study of the questions involved, have changed their views within the last few years, and now hold opinions quite different or the reverse of their former opinions.

Two symptoms have not been mentioned in these papers, which are not so frequent, perhaps, as the others, but are yet of interest,—irritability of temper, or a change of disposition; this may be only an accidental coincidence depending in part upon the annoyance and discomfort caused by the other symptoms; perhaps, however, it may be due to the deficient nutrition of the brain. These patients are often much more disturbed at certain times in the day than at others, are excitable, and sometimes violent. Another symptom is temporary deafness, which may last only a few hours.

The diagnosis between lithæmia and other nervous affections is by no means always easy. Two conditions or diseases may be thought to be present, namely, tumor of the brain and epilepsy, when there is only lithæmia. A patient with headache, tinnitus, vertigo, change of disposition and languor, may be suspected of having a tumor; even a careful examination may not satisfactorily clear up the doubt, and it would be necessary to wait for time to show the truth by the development of other symptoms, or by the recovery of the patient.

Vertigo, even without loss of consciousness raises a suspicion of epilepsy; when several attacks occur near each other, and then again after a long interval another series of attacks, the resemblance is quite close. As a rule, in lithæmia consciousness is not lost; in epilepsy consciousness is usually lost in some of the attacks, though exceptionally these partial attacks may precede by several months or years the fully developed *grand mal*. In lithæmic vertigo the bromides, which usually lessen the number and severity of the epileptic attacks, have little or no influence for good. Yet it is necessary to guard against an apparent benefit which would be deceptive; if the bromides were given at about the time of a natural remission in the

symptoms the drug might seem to be of benefit. Time would show the error.

We probably need to pay more attention to the character of the urine in all doubtful cases.

Dr. David Hunt remarked that this discussion has suggested the relation of the science of medicine to the art of medicine; our history proves that the attempts to use pure hypotheses as foundations upon which to build methods of practice have obstructed the progress of the art of medicine; in the present instance we have no definite knowledge of the formation of urea and of the conditions in which it exists in the blood; such being the case we are very skeptical as to the advantage of adopting the name "lithæmia" as descriptive of a morbid condition for which a special therapeutics is adopted.

If lithæmia is to be considered as a form of larvaceous gout, we must also acknowledge that since Sydenham's day we have added nothing to his description of gout but the name "urea;" yet he has said nothing of tinnitus aurium as a symptom of this or of any other form of the disorder; it is suggestive to observe how little such a clinical artist as Trousseau has been able to add to Sydenham's description, and that he, too, has had nothing to say of tinnitus; as far as therapeutics are concerned it is noticeable also that the alkaline cathartics, so advantageously employed in lithæmia, are just the remedies which Trousseau has warned against as so dangerous in larvaceous gout.

If the blood-poisoning in this condition is to be accepted as the specific cause of the irritation of the auditory nerve, is it not surprising that we hear so little of tinnitus in Bright's Disease, excepting in those cases where we get direct, local causes in the catarrhal affections which accompany it? We know that anæmia causes irritability of this and other nerves; we know that closure of the Eustachian tubes, spasm of the tensor tympani and stapedius muscles, and various disorders, by direct and by reflex action upon the rich nerve supply of the middle ear, cause this symptom; having founded our knowledge upon so much of fact, we hold that it is not good practice to introduce into this department of knowledge a hypothesis founded not only upon no certain knowledge, but also upon no well-known analogy. Aurists, in the vast majority of cases of persistent tinnitus, are able to demonstrate the cause in some local disease; other objective causes no doubt remain to be discovered, but a theory of "lithæmia" is in no way calculated to aid the search. Let us recall the time when every "blepharitis" was "scrofulous," or "gouty," or something else, and then think of the condition to-day, when, as every oculist knows, nine-tenths of the cases of blepharitis are caused by the lack of proper glasses, and ask ourselves if these specious but baseless hypotheses have ever advanced the art of medicine. As long as they kept us from the path which Donders, Von Graefe, and Helmholtz have followed, they not only kept us from the best in art, but they constantly opposed the application of the methods of science; so in this matter a "lithæmic" tinnitus or vertigo, without adding anything to our practical success, will stand in the way of that careful objective study by which Hebra has made modern dermatology what it is, and to which modern science is continually directing the student of medicine.

Dr. Blake thought that the tinnitus aurium, like pain, might be regarded as a physical conscience, too valuable as a symptom to be ignored or put aside with superficial investigation, and that in weighing it as a symptom, due regard should be had to the character of the tinnitus and its origin. Subjective noises in the ear may be, for instance, either of extrinsic or intrinsic origin. Under the former head being included noises resulting from foreign bodies in the external canal, as of hair impinging upon the membrana tympani, movement of fluid in the middle ear, sounds resulting from contraction of the muscles, changes in tension of the membrana tympani, and in the condition of the Eustachian tube, and the like; while under the head of intrinsic causes may be classed, for the purpose of distinction, the various circulatory murmurs and other sounds, more distinctly musical as a rule, which indicate some irritation of the auditory nerve.

In regard to the cases described by Dr. Lyman, the intrinsic cause of the tinnitus may be masked by the existence of a thickening of the mucous membrane of the middle ear, in itself sufficient apparently to account for the subjective sound, in this case a circulatory murmur, the same obstruction in the middle ear which prevents sound from passing inward preventing this sound from passing outward; for, as Dr. Draper says, in cases of gouty habit there is both an irritation and inflammation of the mucous membrane and a vessel dilatation; the former favors a progressive thickening of the mucous membrane of the middle ear, the latter, when it occurs in the ear, furnishes an increased circulatory murmur.

To treat the local trouble of the middle ear only, under such circumstances, is of course a mistake; it is equally a mistake to leave the ear out of consideration altogether and to refer the aural symptom under consideration to general causes alone.

Dr. R. H. Fitz said that he agreed entirely with the views presented by Dr. Putnam, which contain the opinions of the most recent writers upon lithæmia in its various forms and phases. It is still true, however, as Dr. Hunt has stated, that we as yet know but very little about the essential character of the disease, of which we are obliged to judge from a complex and often a contradictory array of symptoms. Most cases in actual practice are best treated by attention to the underlying dyspepsia. In that variety of this disease represented by neurasthenia the patients sometimes lose flesh and grow worse at the same time, though this is far from being the rule. In the dietary of lithæmia each individual patient must find out by experiment and experience what things he can take, and what he must avoid.

Dr. C. F. Folsom stated that he had seen such cases, and that he had arrived at conclusions regarding them similar to those of Dr. Putnam. Dr. Folsom does not feel at all sure of the pathology of these cases, but treats them all on the same general principle. He mentioned a case occurring in a lady in

which tinnitus had been the prominent symptom, and had subsided under tonic treatment. During some years no symptoms of lithæmia were observed, when suddenly, last summer, an attack of gout supervened.

Dr. G. L. Walton remarked that in many instances there is no ascertainable objective cause for subjective sensations of hearing. The amount of distress occasioned by the noise in the ear varies greatly according to the momentary state of mind which the patient may for the time be in, so that a uniform degree of irritation will awaken a very variable and uncertain amount of reaction or response, sometimes to a degree in no way corresponding to the intensity of the cause, and frequently to a degree far in excess of the normal reaction to the cause. We see this illustrated in the ordinary events of daily practice, as when, for example, one patient cannot obtain sleep if a clock be ticking in the room, while another patient may find the silence of the night oppressive from its unbroken stillness, and may absolutely require the aid and companionship of a noisy mechanical device of wheels and bell, weight and pendulum, in order to procure quiet and refreshing slumber. The symptoms at different times are variable while the cause may be the same; there is a change in the amount of reaction from a uniform degree of stimulation. It is very probable that the functions of the nerve centers become disordered from anæmia due to malnutrition.

Dr. Hunt thought that not half the cases of tinnitus could be explained on the hypothesis of a functional disorder of the nerve centers from excess of uric acid in the blood. All subjective noises are produced by irritation of some or all the fibers of the auditory nerve in some part of its course. It is not necessary to seize upon the idea of a lithæmic excess to account for this symptom, as we may be thus diverted from the real object of our study, which may be of an entirely different character.

Dr. Lyman agreed with the main portion of the discussion, and freely admitted that a large proportion of the cases of tinnitus may be accounted for by tangible and ascertainable disease, but a considerable number are not due to such causation. The question is, "What causes the tinnitus in these cases?" It may be due to the blood. It is known that a suitable nutrition and the vaso-motor system both have much to do with subjective symptoms of all kinds. Under these conditions the heart may be deranged. This symptom is present in a group of cases which represents a large class of patients with subjective auditory symptoms, and particularly tinnitus. The treatment advocated in the paper read before this meeting relieves these symptoms, and we naturally deduce the theory of blood change. Many opposing hypotheses have been brought forward in relation to these well-known symptoms, and we might well become bewildered and skeptical of any knowledge upon the subject. In the cases here presented the subjective phenomena were marked, and in all quickly yielded to the same treatment, and the treatment may be claimed as a truly curative one in tinnitus and vertigo.

Dr. G. B. Shattuck said that he had intended calling attention to the result of the treatment as supporting the diagnosis in the cases reported. Many cases, however, are observed in which tinnitus and vertigo occur, one or both, and which may undoubtedly be regarded simply as cases of malnutrition. When we attempt to group all these cases under the head of lithæmia we should not allow the name to deceive us as to the extent of our knowledge in regard to them.

DOMESTIC CORRESPONDENCE.

LETTER FROM INDIANAPOLIS, INDIANA.

Mr. Editor:—The two medical colleges (regular) of this city opened the session of 1883–4 in September last, the Medical College of Indiana with fifty students, and the Central College of Physicians and Surgeons with twenty. The average attendance during the year at the former is 100, the latter fifty. Both these schools now require a preliminary examination of students before admission to the course of lectures. This is the first step in the line of progress towards a better and higher medical education. We cannot fail to notice the good effect that the agitation of the "regulation of the practice" has produced, and also the beneficial influence exerted by the Illinois State Board of Health in this direction. For some years past the State of Indiana has been the receptacle for the incompetent and worthless practitioners that have been driven from Illinois, and it is high time that the medical schools of Indiana should draw the line closer. That there should be a law to protect the people against the invasion of incompetent or unworthy practitioners from other States or countries, is, we think, self-evident.

The Indianapolis City Hospital, that was formerly a disgrace to the city and the profession, now affords accommodations for all who, under its rules, can be admitted. A State hospital, where all the sick of the State that seek hospital accommodations can be properly cared for, is needed, and in the near future we hope to be able to announce the establishment of such an institution.

The medical profession of Indianapolis has, by death and removal, lost some of its most prominent members during the last few months. By death, Prof. R. M. Todd, M.D., who was eminent in his profession, and a forcible, impressive lecturer. At the time of his death he occupied the chair of Theory and Practice in the Medical College of Indiana. By the removal of Prof. T. Parvin to Philadelphia, Pa., a vacancy has been made that will be hard, in some respects, to fill. Another one of our oldest practitioners, W. H. Woodburn, M.D., has removed to the "wilds" of Dakota, and also changed his occupation to the peaceable pursuit of stock-raising. We trust he may be an example, so few in number, of a physician successfully adapting himself to other business.

Boston and Indianapolis are alike in one respect, viz., they each have their "poet" physician. The one of Boston we need not name, as there is but *one*.

Ours is Luther Dana Waterman. He was known to his fellows as capable of fairly expressing himself in prose, but that he would be guilty of poetic effusion was not suspected. He appeared suddenly, like a bright new star in the cluster of American muses. His first offering is an edition of ninety-five detached philosophical assertions in blank verse. It enables us to present another example showing that the study and practice of medicine need not, of necessity, make a "one idea" man.

The Marion County Medical Society meets each Tuesday evening, at Indianapolis. Formerly, the physicians of the city alone were members of a local medical society named the "Indianapolis Academy of Medicine." But since the change in the organization of the State Medical Society, county societies have taken the place of other local bodies of this nature, the State Society being composed of delegates from county societies. Thus Indiana has as perfect a system of organized medical bodies as can be found in the Union.

The subject of "Code" and "anti-Code" sometimes disturbs the usual harmony existing among the members, they forgetting that the "Code" was made by the "fathers" in the American Medical Association, and that it must be upheld or changed by them alone.

During the past few weeks valuable articles have been presented to and considered by this Society, upon the subjects of "Malaria," "The Proper Status of Chemical Analysis of Potable Water," "Puerperal Fever," "Gun Shot Wounds," etc.

In discussing the subject of "Potable Water Supply," it was conceded that the use of "dug" wells as such a source of supply should be abandoned, at least in cities and towns, and that "tubed" wells, driven to the second or third stream or strata of water, furnished a pure, wholesome supply; and that cisterns containing rain water, purified by passing through hard brick or porous stone, were also a safe and convenient source of supply. It is idle to rely upon chemical analysis alone to determine the wholesome character of potable water. This truth is fully shown by the report of Dr. Mallet to the National Board of Health, and recorded in Transactions of the American Public Health Association of 1882. The easily understood rules as to the proper water supply, as above given, will solve the problem as to purity, except in cases where water-works demand a larger supply for consumers. But in this case all streams receiving sewage sbould be avoided.

The subject of puerperal fever was brought before the Society by a case reported by Dr. Jeffries. Death occurred within 12 days after delivery. The inefficiency of continued large doses of quinine to reduce, in any great degree, the abnormal temperature in this case was fully shown. A slight laceration at the os uteri was found, and in the discussion of the case it was held by a portion of the members that through this "door-way" the septic material gained access, and this was the cause of the trouble. The history of the case, however, developed the fact that there had been, for some cause, a lack of a proper contraction of the uterus, so that the clotted blood, etc., had not been sufficiently expelled, but remained undergoing changes that might cause all of the constitutional trouble. The question of washing out the uterus with simple or medicated water was discussed, and the broad assertion made that as a preventive measure, the uterus in all cases of child-birth, should be treated in this manner. This was properly questioned by others who clearly recognized that nature, by immediate and firm contraction, expelled what ought to be cast off; that the washing out of a normal, healthy-acting uterus directly after child-birth would be properly classed as "meddlesome midwifery," while it might be called for when nature or the medical attendant should fail to obtain the normal contraction of the organ.

At the meeting of the Society, Nov. 6, 1883, Dr. T. N. Bryan reported a case of early abortion. In the discussion of this case an interesting question in medical jurisprudence was brought up, viz.: How long a time could elapse after rupture of the membranes before the abortion would take place? The subject involved had, at one time, been before the courts in the case of a practitioner charged with committing criminal abortion. Some of the experts held that in case the membranes were ruptured, abortion would take place within 24 hours in all cases, and upon this testimony the physician was cleared of the charge.

The question was answered in this discussion by Dr. Harvey, who stated that three or four days, or as many weeks, might elapse after the rupture of the membranes before abortion occurred. And he reported two cases where, in the first, two, and in the second three weeks elapsed after rupture of the membranes before the fœtus was expelled.

In your journal of October 13, there appears a notice relating to "training nurses," as recommended by Prof. Gross, at the last session of the American Medical Association. The appreciation of the wisdom of such suggestion has been shown by the action taken at many points, to establish suitable provisions for the proper education and training of nurses. At Indianapolis steps have been taken for this purpose, the "school" being in connection with the City Hospital, and the gentlemen connected with both medical colleges acting as teachers. A suitable number of female teachers has also been secured. This is certainly one of the most sensible movements that have been inaugurated, and, if rightly carried out, will provide the means of furnishing comfort to the sick, and greatly aid in preventing disease. Whether women are suited for surgeons or general practitioners of medicine may be an open question, but the lives of Madame Bovine, La Chapelle, and others, decide the question as to their fitness as *accoucheurs*. That they are the best of nurses, when properly educated and trained, cannot be questioned.

The public health work in Indiana progresses slowly; it may be that this is best, so that calm experience may have its perfect work. The work in this State was brought into existence through much suffering, and, in its infancy, was cradled as in a tempestuous sea; may it prove a child Hercules that, by reason of its strength, may survive its early foes.

Several bills for the "regulation of the practice of medicine" have been before the State Legislature each session since that of 1878–9. Some were good and some very poor. Experience has taught that while a law that required only a preliminary examination before the entrance of a student into college, and an examination by a competent Board of those who do not possess a diploma, is capable, by good management, of doing much good, still the only certain prevention of the flooding of the country with incompetent practitioners will be found in requiring an examination, by a Board wholly separate from a college faculty, of *all* who desire to enter the practice of medicine. In addition, a diploma should be first required. Only by way of such an impartial examination will medical colleges be incited to proper care and diligence, and the ranks of the profession be purified.

The composition of such a "Board of Examiners" is of some importance. In some of the States, the State Board of Health is given the powers of such an examining board. We think this is impolitic, if for no other reason than that a board of health will always have its hands full in attending properly to the health department of State Medicine, while it is as much as any body of men is able to do in a proper manner, to regulate the practice of medicine in their State. It is certain that wherever the work connected with public health is sought to be controlled, that also the depredations of incompetent or dishonest practitioners should be prevented. But it is as certain that wherever both duties are delegated to the same Board, there is a risk of having one or the other of the works slighted. By good luck such a combination may, for a time, succeed in doing much good. But it is impossible that anything like perfect work shall be done, unless the organizations are separate. Yours truly, THAD. M. STEVENS.

LETTER FROM WASHINGTON.

The regular bi-weekly meeting of the Biological Society was held on Friday, Nov. 30, when Dr. Frank Baker read a paper entitled, "The Natural Study of Anatomy."

Dr. Baker's paper was an exposition of the faults of method in the ordinary English text-books of anatomy, with suggestions toward a remedy. The anatomy of the text-books is too mechanical and hardly deserves the name of science, there being no attempt to gradually unfold and develop the subject, as in other sciences. Without preliminary notions the student is plunged at once into the dry details of a geometric description of surfaces and their relations, all interest of practical application or of intelligent comprehension of the meaning of what is disclosed by dissection being suppressed. The alliance between anatomy and physiology is indissoluble, a certain violence being done to either science when its twin is suppressed. This should be kept in view, and function brought forward as establishing structure and slowly changing it.

This method may be applied in three ways: 1st, as illustrating the immediate connection between structure and function, to which belong practical applications of anatomy, which should always be used to illustrate and impress upon the learner the necessity for mastering the dry details: 2d, the correct use of embryology and histology as illustrating the gradual formation and simplest elements of the body; the great advantage of this being that it proceeds from simple to complex. Illustrations were given of the ease with which complicated structures could be explained by this means, the examples being the joints, the temporal bone, the vascular system and the brain.

Instead of placing embryology and histology as separate sections, there should be a few chapters giving the general development of the body and the epithelial and connective tissue structures, the development and structure of separate organs preceding always the description of those organs. Only general outlines to be given, not superseding elaborate treatises on these subjects.

3rd, the moderate use of comparative anatomy, both as throwing light on the real nature of human structures, and as affording by points of contrast means for retaining their details firmly in mind.

The whole work should be preceded by an outline of the accepted parts of the theory of descent with modification especially, heredity, variation, differentiation and division of labor.

A short review was given of the various works on anatomy in English, French and German, the last being considered the best, especially the new work of Gegenbaur, which, as a purely scientific treatise, was the best extant, but should be adapted for general use by additional matter on topographical, surgical and applied anatomy.

The paper elicited considerable discussion, two of the physicians present holding that since the present system had been long and severely tried, it was the best that could be devised; that the one proposed had not only the sin of novelty, it was clumsy, irregular, and too extended for practical use.

The biologists present seemed to be unanimously of the opinion that the method proposed was undoubtedly an improvement, and the one which all sound science showed to be correct. A knowledge of names is not so important as a knowledge of the nature of the structures, which cannot be obtained by the old method. Prof. Cope stated that the method proposed had been employed for some years by Prof. Leidy, of the University of Pennsylvania, and had not been found cumbrous, but was, on the contrary, feasible and satisfactory. Prof. Riley was shocked to find text-books on human anatomy so far behind the demands of modern biological science. It seemed the general opinion of the biologists that a method which had been applied with signal advantage to other branches of the biological tree could not fail of good results when used in human anatomy.

NECROLOGY.

MONTGOMERY, JOSEPH FAUNTLEROY, M.D., of Sacramento, Cal., was born in Nelson county, Va., Nov. 15, 1812, died suddenly in his office where he lodged, in Sacramento, Oct. 6th, 1883. He was the son of Joseph and Jane (Woods) Montgomery, of Irish descent. Having secured a good English and a fair classical education, he began the study of medicine, attending the University of Virginia. He graduated M.D. in 1833, and the following year took a course of lectures at the University of Pennsylvania, where he graduated in 1834. Dr. Montgomery wrote his thesis on Chlorine. Returning to his native county he began practice, but in 1836 removed to Jackson, Miss., where he remained until 1842, when he returned to Nelson Co. He was among the earliest emigrants to California, and settled permanently in Sacramento in 1850, and was among the oldest medical practitioners in California. He was a man fond of study, with an ardent love for his profession, and well informed on all the leading questions of the day. He was one of the original members of the Sacramento Medical Society for Medical Improvement, and its Vice-President in 1859 and again in 1871, and President in 1874. A member of the California State Medical Society, in which he has filled acceptably most of its offices, and long Chairman of the Standing Committee. Since 1870 he has been a member of the State Board of Health. He was one of the original members of the Board of Medical Examiners, and served for a number of years. He became a member of the American Medical Association in 1871.

Dr. Montgomery was a skillful surgeon as well as a good general practitioner. Many of his surgical operations were quite notable, and some of them have been reported in the journals. His more important contributions to medical literature may be found in the Transactions of the societies to which he belonged, and in the current medical periodicals. The following papers have attracted some attention: "Burns and Scalds;" "Treatment of Typhoid Fever;" "Fracture of the Inferior Maxillary Bone, with New Apparatus for Treatment;" "Adulteration of Food, Drinks and Drugs;" "Reports on Medical Education;" "Public Hygiene and State Medicine." Dr. Montgomery was never married, and leaves no known relations in California. His professional life is amply referred to in the November number of the *Pacific Journal*.

J. M. T.

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM DECEMBER 7, 1883, TO DECEMBER 14, 1883:

Shufeldt, Robert W., Captain and Assistant Surgeon: now on sick leave, relieved from duty in the Department of the East and assigned to temporary duty in the office of the Surgeon General of the Army. (Par. 12, S. O. 284, A. G. O., December 12, 1883.)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING DECEMBER 15, 1883:

Surgeon F. M. Dearborne, placed on the retired list from December 10.

P. A. Surgeon A. C. Heffinger, in addition to his duties at the Navy Yard, ordered to attend officers at Portsmouth, N. H.

NEW BOOKS.

Kitchen, J. M. W. Students' Manual of Diseases of the Nose and Throat. New York: G. P. Putnam's Sons, 1883. 6 ? 127 p. il. cl. $1.00.

Archiv. f. Psychiatrie u. Nervenkrankheiten. 174 Bd. 4 ft. Berlin, Hirschwald.

Frick, Dr. Carl Frdr. Die Diphtheritis od. Rachenbraüne, Popular Besprochen. 8vo. 95 pp. Q. Aufl. Wolmirstedt.

Friedrich, V. Diphtheritis u. Deren Erfolgreiche Behandlung Nach Langjährig Bewährter Heilmithode. 8vo. 34 pp. Neuured Heusers Verl.

John, Prof. Dr. Üb. Athmung, Athmungshrft u. Lustverderbniss. Berlin, Parey.

Klinik, Wiener. Vorträge aus der Gesamruten Prakt. Heilkunde 10 Hft. Wien, Urban & Schwarzenberg.

Kormann, San. R. Dr. Ernst. Lehrbuch der Geburtshilfe f. Ærzte u. Studierende Mit 106 Holzschen. 8o. XI, 538 pp. Tübinzen, Laup.

Kuhnt, Prof. Dr. Herm. Beiträge zur Operativen Angenheilkunde Mit 12 Holzschn. 8vo. V. 97 pp.. Jena, Fischer.

Küstner, Prof. Dr. Otto. Beiträge zur Lehre v. der Endometritis Mit 2 lith. 7 af. Imp. 4to. 64 pp. Jena, Fischer.

Langer, Hofr. Prof. Dr. Carl. Anatomie der Äusseren Formen d. Meuschlich en Köopers. Mit 120 Holzschen. 8vo. XII, 296 pp. Wien Toeplitz & Deuticke.

Medicinal-Kalender, Deutscher. 16mo. VIII, 192, 123 und 111, 114 pp. Erlangen-Berold für den Preussischen Staat. 12mo. V. 369 u. LXXXII, 454 pp. Berlin, Hirschwald.

Niemyer's, Weil Prof. Dr. Fel. V. Lehrbruch der Speciellen Pathologie u. Therapie u. s. w. II. Veränd u. Verm. Anfl. 1. Bd. 8vo. VIII, 878 pp. Berlin, Hirschwald.

Preyer, Prof. W. Specielle Physiologie d. Embryo. (In 4 Spgn) 1 Spg. Mit 3 chromolith 7 af. u. Holzschen. 8vo. 160 pp. Leipzig, Grieben.

Puschmann, Prof. Dr. Thdr. Die Medicin in Wein Während der Letzten 100 Jahre. 8vo. VIII, 327 pp. Wien, Perles.

Receptformelu der Medicinischen Klinik zu Leipzig 3 Auft. 12mo. XI, 26 pp. Leipzie, Lorentz.

Reibmagr, Dr. Alb. Die Massage Behandlung, Populär Dargestellt. 8vo. III, 50 pp. Wien, Toeplitz, & Deuticke.

Robinski, Dr. Severin. Zur Kenntniss der Angenlinse u. deren Untersuchungs-Methoden. 8vo. 62 pp. Berlin, Grosser.

Roser, Geh. Med. R. Prof. W. Handbuch der Anatomischen Chirurgie. 8 Aug. 3 (Schluss) Abth. 8vo. XIII, pages 481. 826. Tübingen, Laupp.

Sperrlingk, Alfl. Üb. echte Sitophobie Inaugural Dissertation 8vo. 52 pp. Dorpat, Schnakenburg.

Stahl, Dr. Karl. Geburtshülfliche Operationslehre. 8vo. VIII, 198 pp. Stuttgart, Enke.

THE

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ORIGINAL ARTICLES.

LOSS AND SUBSEQUENT RECOVERY OF A SOFT-RUBBER CATHETER IN THE BLADDER.

BY H. B. OSBORNE, M.D., KALAMAZOO, MICH.

[Reported to the Kalamazoo District Medical and Surgical Association, Nov. 27, 1883.]

MR. PRESIDENT AND FELLOWS:

I wish to relate the circumstance of the loss of a soft rubber catheter in the bladder, and its recovery twenty-four hours later.

The fracture of a silver catheter in the urethra is an occurrence that has frequently been recorded, and that of a gum catheter also, but the loss of a complete soft rubber catheter is unique to me. On October 12 a young gentleman came to my office for the relief of an over-distended bladder, stating that he had not urinated in about twenty hours. He was on the dancing-floor, and had an urgent call to empty the bladder the evening before, but postponed the act until the "figure was through." When he made the attempt he found he could not accomplish the act because of a sharp pain in the perinæum. On examination, I found an enlarged and œdematous penis, the result of a recent clap, from which he was still suffering. Thinking the urethra might be quite sensitive, I took a No. 13 soft rubber catheter, warmed and well oiled; gently wormed it into the bladder. There came at once a free flow of strong ammoniacal urine, and mixed with a muco-purulent matter. Then the stream became small and dribbling; yet he desired me to hold on a moment before withdrawing the instrument, as he felt that there was more to come. I grasped the penis with three fingers of my right hand, and held the catheter with my thumb and index finger, which were oily; and holding a cup with my left, I requested him to make expulsive effort. With the attempt there was a spasm of the bladder, and so quick and powerful that the instrument slipped from my grasp and disappeared in his urethra. I grasped the penis, and found that the instrument had receded some three inches within the urethra. I called for my fixation and long dressing forceps. Finding the former too short, I introduced the long forceps in the hope of grasping the catheter, but as I approached it and began opening the jaws of the forceps there was another spasmodic contraction, and the instrument receded into the bladder. Possibly some of you can imagine my feelings at this moment.

I quietly told the young man not to be alarmed, but that I would remove it on the morrow. I searched the instrument stores and the doctors' offices for an instrument to remove foreign bodies from the bladder, but in vain, and telegraphed to Chicago for Mathieu's little instrument to be sent by express. I then made an appointment with Dr. H. O. Hitchcock to meet me at my office the next day at 3 P. M.

During this time I was worrying some, and fearing that the instrument might not come, trying to devise some means for the removal of the catheter and relief of my patient, and finally settled on a No. 8 brass wire, and after doubling it on itself and soldering it together, using its free ends for rings, I made a curve the same as in Gouley's or Otis' sound, and leaving the distal end a half inch longer than necessary, which I bent sharply toward the curve, over a No. 12 steel sound, and my instrument was finished, which on sight met the approval of Dr. Hitchcock, and at 3:30 P. M., October 13, we found that the instrument telegraphed for had not arrived. We resolved to try our own instrument. After well oiling it I introduced it into the bladder and passed my finger into the rectum, and gave over the manipulation of the instrument to Dr. Hitchcock, who rotated it a moment and began its withdrawal. I felt the end of the instrument pass from the bladder into the membranous urethra with something in its grasp which felt like the missing catheter. The withdrawal continued till the instrument had passed the prostatic urethra, where it hung, and further attempts at withdrawal caused the patient so much pain that I administered a little ether, and as soon as possible began other manœuvers for its withdrawal. Dr. H. inserted his left index finger into the rectum, and I used considerable force in a line with the curve of the instrument, but without much progress, when Dr. H. rotated the instrument and depressed the handle with continual traction, when, to our delight, the catheter appeared at the meatus, doubled and firmly held in the grasp of the instrument. We slit the meatus about four lines, when the delivery was safely and easily accomplished, much to the relief of our minds and likewise our patient's bladder. The instrument, though crude, did its work well, and is, I think, worthy of trial under similar circumstances.

REPORT OF LIBRARIAN.

ANNUAL REPORT OF THE LIBRARIAN OF THE AMERICAN MEDICAL ASSOCIATION AT THE ANNUAL MEETING IN CLEVELAND, JUNE, 1883.

[By C. H. A. Kleinschmidt, M.D., Washington, D. C.]

CATALOGUE OF ADDITIONS BY DONATIONS, EXCHANGES AND SUBSCRIPTION TO THE LIBRARY OF THE AMERICAN MEDICAL ASSOCIATION, FROM MAY 1, 1882, TO MAY 1, 1883.

Army Engineer Department (United States).—Annual Reports of the Chief of Engineers for 1881, 3 vols. 8vo.; for 1882, 3 vols., 8v. Donor, Engineer Bureau. Professional papers of the Corps of Engineers. No. 24, 1882.—Report upon the Primary Triangulation of the United States Lake Survey, Lieut. Col. C. B. Comstock, Corps of Engineers. No. 25, 1883.—Report upon the Practice in Europe with the Heavy Armstrong, Woolwich and Krupp Rifled Guns. Submitted by the Board of Engineers; Col. F. B. Towers, President of the Board; Donor, Engineer Bureau.

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Clausen (F.)—De Scholüs Veteribus in Aves Aristophanis Compositis. Kiel, 1881.

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Man. (W.)—Ueber Scoloplos Armiger, O. F. Müller. Leipzig, 1881.

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Oelfen (H.)—Die Differential gleichungen für das Gleichgewicht der isotropen elastischen Platte. Kiel, 1881.

Peters (G.)—Weber Siderosis. Kiel, 1881.

Peterson (G.)—Ueber die Stoffwechsel-Vorgänge beim Intermittensfall. Kiel, 1881.

Quiehl (K.)—Der Gebrauch des Konjuactivs in den ältesten französischen Sprachdenkmälern. Kiel, 1881.

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Goodwillie, (D. H.)—Application by Insufflation of Medicated Powders to the Upper Air Passages for the Relief of Catarrhal Conditions; Reprint; Donor: Author. Arthritis of the Temporo-Maxillary Articulation. Reprint; pp. 5. Donor: Author.

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New York—New York Hospital and Bloomingdale Asylum. Report for 1882; pp. 53. Inebriate Home, Fort Hamilton, N. Y. Annual Report of the President, L. D. Mason, M.D.; pp. 27. Donor: Author. State Lunatic Asylum, Utica. Reports for 1881 and 1882.

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Lamb, (D. S.)—Report of the Post-Mortem of the Body of C. J. Guiteau. Reprint; pp. 22. Donor: Author.

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Marcy, (H. O.)—The Best Methods of Treating Operative Wounds. Reprint: pp. 16. Donor: Author.

Mason, (Louis D.) Alcoholic Anæsthesia. Reprint. Donor: Author.

Mason, (Theodore L.) Address: Inebriety a Disease. 1882. Donor: Author.

Morrison (R. B.)—Bacteria and their Presence in Syphilitic Secretions. Reprint. Donor, Author.

New Sonth Wales in 1881.—Thos. Richards, Sydney, 1882, pp. 144. Donor, Royal Society of New South Wales.

Agata (M.).—Ueber die Verdauung nach der Aus-

haltung des Magens. Aus dem physiologischen Institute zu Leipzig, pp. 17. Donor, Author.

Parke, Davis & Co.—Working Bulletins, 1882. Donor, Parke, Davis & Co.

PERIODICALS.

Belgium.—Archives Médicales Belges, Organe du Corps Sanitaire de l'Armee, Buxeles. Third Series, Vol. xxi Fasciculi 3, 4, 5, 6, Vol. xxii, vol. xxiii. Fasciculi 1, 2, 3. Fxchange.

BRITISH AMERICA.

Canada (the) Medical Record; Editor, Francis W. Campbell, Montreal. Vol. x., Nos. 8-12; vol. xi, Nos. 2-6. Exchange.

Canada Medical and Surgical Journal, Montreal. Vol. x., Nos. 11, 12; vol. xi., Nos. 1 to 9. Exchange.

Canadian (the) Journal of Mediçal Sciences, Toronto. Vol vii., Nos. 5 to 12. Exchange.

Canadian Practitioner (the), formerly the Canadian Journal of Medical Sciences, vol. viii., Nos. 2, 3, 4. Exchange.

L'Union Médicale du Canada. Revue mensuelle de Médecine et de Chirurgie, Montreal, vol. xi., Nos. 5 to 12; vol. xii., Nos. 1 to 6. Exchange.

FRANCE.

Algeria.—Gazette Mèdicale de l'Algèrie; Directeur, Fondateur le Dr. A. Bertheraud, 29 Rue Bergère, Paris monthly, 27. Aannèe, Nos. 11 to 15, 17 to 21, 24; 28. Aannèe Nos. 1, 4, 5. Exchange.

Journal de Médecine et de Pharmacie de l'Algeris, Medicine et Hygiene de Colonisation, Pharmacie et Chimàe Medecine Vétérinaire. Igies ia direction de M. le Dr. E. L. Bertherand. Algiers (7 Reve Bruce) 5mo. Année No. 3. 7mo Année Nos. 10, 11, 8mo. Année No. 1.

Paris.—Archives Navale Recueil fondé par S. E. Le Cte. P. de Chasseloup-Laubat, Ministre de la Marine et des Colonies. Publiè sous la surveillance de l'inspection générale du service de santé. Directeur de la Rédaction, A. Le Roy de Mericourt. Tome xxxvii., Nos. 4 to 12. Tome xxxviii., Nos. 2, 3, 4. Exchange.

Journal de Médecine et de Chirurgie, pratiques, à l'usage des médecius praticiens. Fondé pas Lucas-Championniére, Tome liii., Nos. 4, 6 to 12. Tome liv., Nos. 1 to 4. Exchange.

La Lumiére Electrique, Journal Universel d'Electricité. 3mo. Année, No. 71, 4mo. Année, Nos. 2 to 7.

Lancette, La, Francaise, Gazette des Hopitaux Civils et militaires, paraissant les mardi, Jendi et Samedi 54mo. Année, Nos. 124 to 151; 55mo. Année, Nos. 1 to 150; 56mo. Année, Nos. 1 to 13. Exchange.

Recueil de Mémoires de Médecine de Chirurgie et de Pharmacie Militaire, Publié par ordre au Ministre de la Guerre sous la direction der Conseil de Santé des Armées. Paraissant tous les deux mois. Tome xxxviii., Nos. 209 to 212. Exchange.

Révue Scientifique et Administrative des Médicius des Armées. Paraissant tous les deux mois, 33mo. Année, vol. x., Nos. 200 to 202. Exchange.

Service de Santé Militaire, Bulletin du. Paraissant um fois par mois. 32mo. Année, Nos. 297 to 299, Nos. 301 to 305. Exchange.

GERMANY.

Leipzig.—Derztliches Vereinsblatt für Deutschland. Organ des Deutschen Aerztvereinsbundes. Redacteur, Dr. Heinze, vol. xi., Nos. 121 to 128, vol. xii., No. 120 to 131. Exchange.

GREAT BRITAIN.

Customs Gazette.—Imperial Maritime Customs Medical Reports. Published by order of the Inspector-General of Customs, Shanghai, China. Nos. 21 to 23. Exchange.

Glasgow, the, Medical Journal; edited by Joseph Coats, vol. xvii., Nos. 5, 6; vols. xviii., xix., Nos. 1 to 4. Exchange.

RUSSIA.

St. Petersburger Medicinische Wochenschrift Redacteur Dr. Moritz. Vol. VII., Nos. 17 to 52. Vol. VIII., Nos. 1 to 4, 6 to 10, 14. Exchange.

SWEDEN.

Nordisk Medicinskt Arkis. Undes Medeverken af Prof. Dr. G. Asp (and others) seeigeradt af Dr. Axel Key. Stockholm tjortonde Bandet. Exchange.

UNITED STATES.

American (the) Journal of Dental Science. Edited by F. J. S. Gorgas. Monthly. Baltimore. Third Series, Vol. XVI., No. 3.

American (the) Journal of Insanity. Edited by the Medical Officers of the New York State Lunatic Asylum. Quarterly. Utica. Vol. XXXIX., Nos. 1 to 3. Exchange.

American, the, Journal of Obstetrics and Diseases of Women and Children. Quarterly. Editor: P F. Mundè. Vol. XV., Supplements for June, October, November and December.

American, the, Medical Weekly. New York. E. S. Gaillard, Editor and Publisher. Vol. XIV., Nos. 21 to 27. Vol. XV., Nos. 2 to 21, 23 to 26. Vol. xvi., Nos. 1 to 3. Exchange.

American, the, Veterinary Review. A. Liautard, Editor. New York. Vol. vi., Nos. 3 to 6, 8 to 12. Vol. vii., Nos. 1, 2. Exchange.

Annals of Anatomy and Surgery. The Journal of the Anatomical and Surgical Society. Brooklyn, N. Y. Edited by L. S. Pitcher, G. R. Fowler. Vol. vii., Nos. 1 to 4, 6. Vol. vii., Nos. 1, 2, 4. Exchange.

Archives of Dermatology. A Quarterly Journal of Skin and Venereal Diseases. Edited by L. Duncan Buckley, New York.. Vol. viii., Nos. 2, 3, 4. Exchange.

Atlanta Medical Register. New Series. Vol. i., Nos. 9, 10, 11. Vol. ii., Nos. 2, 3, 5. Exchange.

Bistoury, the, Elmira. New York. Quarterly. Thad. S. Updegraff, editor. Vol. xix., Nos. 2, 3, 4. Vol. xx., No. 1. Exchange.

Boston, the, Journal of Chemistry. Devoted to the science of home life, the arts, agriculture and medicine. Now under the title "The Popular Science

News and Boston Journal of Chemistry." Vol. xvi., Nos. 5 to 12. Vol. xvii., Nos 1 to 5. Exchange.

Boston, the, Medical and Surgical Journal. A weekly journal of medicine and surgery. Vol. cvi., Nos. 14 to 27. Vol. cvii., Nos. 2 to 26. Vol. cviii, Nos. 1 to 18. Exchange.

Buffalo, the, Medical and Surgical Journal. Edited by J. F. Miner and G. N. Brush. Vol. xxi., Nos. 11, 12. Vol. xxii., Nos. 1 to 9. Exchange.

Chicago (The) Medical Journal and Examiner. Monthly. Editor, W. H. Byford. Vol. XLIV., Nos. 5, 6. Vol. XLV., Nos. 1 to 5. Exchange.

Cincinnati (The) Lancet and Clinic. A Weekly Journal of Medicine and Surgery, issued every Saturday. New Series, Vol. VIII, Nos. 21 to 25. Vol. IX. Vol. X., Nos. 1 to 18. Exchange.

Cincinnati (The) Medical Advance. Vol. XII. Nos. 11, 12. Vol. XIII., Nos. 1 to 10. Exchange.

Cincinnati (The) Medical News. J. A. Thacker, Editor. Vol. XI., Nos. 5 to 12. Vol. XII. Nos. 1 to 4. Exchange.

Clinical Brief (The) and Sanitary News. Monthly. Cincinnati. New Vol, I., Nos. 1, 2. Exchange.

College (The) and Clinical Record. A Monthly Medical Journal, conducted especially in the interests of the Graduates and Students of Jefferson Medical College. Edited by R. J. Dunglison and Frank Woodbury. Vol. III., Nos. 5 to 10. Exchange.

Columbus (The) Medical Journal. Monthly. A Continuation of the Ohio Medical Journal. Editors, J. F. Baldwin, J. H. Lowman, and others. Vol. i., Nos. 1, 2, 4 to 10. Exchange.

Denver (The) Medical Times. Monthly. Thos. H. Hawkins, Editor. Vol. ii., Nos. 1 to 4. Exchange.

Detroit (The) Clinic. A Weekly Exponent of Clinical Medicine and Surgery. Edited by H. O. Walker and O. W. Owen. Vol. i., Nos. 24 to 52. Exchange.

Detroit (The) Lancet. A Monthly Exponent of Rational Medicine. Editor, Leartus Connor. Vol. v., 1, 12. Vol. vi., Nos. 1 to 7, 9 to 11. Exchange.

Eclectic (The) Medical Journal. Monthly. Cincinnati. Editor, J. M. Scudder. Vol. x. to 11. Nos. 6 to 12. Vol x. to iii. Nos. 1 to 5. Exchange.

Gaillard's Medical Journal (formerly Richmond and Louisville Medical Journal.) New York. Monthly. Editor, E. S. Gaillard. Vol. xxxiv. Nos. 1 to 6. Exchange.

Gaillard's Medical Journal. (The American Medical Weekly. New York. Editor, E. S. Gaillard. Vol. xxxv. Nos. 4 to 18. Exchange.

Independent, The, Practitioner. A Monthly Journal, devoted to Medicine, Surgery, Obstetrics, Dentistry, Pathology, and Popular Science. Editors, L. H. Hunt, W. C. Barrett. Baltimore. Vol. iii. Nos. 5 to 8, 9 to 12. Vol. iv., Nos. 1 to 4. Exchange.

Index Medicus. A monthly classified record of the current medical literature of the world. Compiled under the supervision of John S. Billings and Robert Fletcher. New York. Vol. iv., Nos. 4 to 12. Index to Vol. iv., Vol. v., Nos. 1 to 3.

Journal, The, of Cutaneous and Venereal Diseases. Monthly. Edited by H. G. Piffard and P. A. Morrow. New York. Vol. i, No. 4.

Journal, The, of Materia Medica. Devoted to materia medica, pharmacy, chemistry and new remedies. Edited by X. T. Bates and A. N. Allen. Monthly. New Lebanon, N. Y. Vol. xxi, No. 5.

Kansas Medical Index. (Now Kansas and Missouri Valley Medical Index.) F. F. Dickman and W. C. Boteler, editors. Fort Scott. Vol. 3, Nos. 5 to 12; Vol. iv, Nos. 2 to 4. Exchange.

Leonard's Illustrated Medical Journal. Published quarterly. Detroit. Vol. iii, Nos. 3, 4; Vol. iv. Nos. 1, 2. Exchange.

Louisville, The, Medical News. A weekly journal of medicine and surgery. Edited by L. P. Yandell and L. S. McMurtry. Vol. xiii, Nos. 335 to 341; Vol. xiv; Vol. xv, Nos. 368 to 380. Exchange.

Maryland, The Medical Journal. A semi-monthly journal of medicine and surgery. Edited by T. A. Ashby and others. Vol. ix, Nos. 3 to 24. Exchange.

Medical, The, Age. A semi-monthly review of medicine and surgery. Detroit. Editor, J. J. Mulheron. Vol. 1, Nos. 1 to 8. Exchange.

Medical, The, Brief. A monthly journal of practical medicine. Lawrence & Son, publishers, St. Louis. Vol. x, Nos. 5 to 12; Vol. xi, 1, 3 to 5. Exchange.

Medical, The, Bulletin. A monthly journal of medicine and surgery. Editor, J. V. Shoemaker. Philadelphia. Vol. iv, Nos. 6 to 12; Vol. v, Nos. 1 to 4 Exchange.

Medical, The, Chronicle. Monthly. Baltimore. Editor, G. H. Rohé. Vol. i, Nos. 1 to 10.

Medical, The, Gazette (formerly the Hospital Gazette). A weekly journal of medicine, surgery and the collateral sciences. E. J. Bermingham, editor. New York. Vol. ix, Nos. 21 to 52; Vol. x, Nos. 1 to 18. Exchange.

Medical, The, Herald. Louisville, Ky. D. S. Reynolds, editor. Monthly. Vol. iv, Nos. 38 to 48. Exchange.

Medical News. A weekly medical journal. Philadelphia. Vol. xl, Nos. 1 to 25; Vol. xli, Nos. 1 to 7.

Medical, The, Record. A weekly journal of medicine and surgery. Edited by G. F. Shrady. New York. Vol. xxi, Nos. 22 to 25; Vol. xxii; Vol. xxiii, Nos. 1 to 18. Exchange.

Medical, The, Register. A record of the literature of medicine and the allied sciences. Monthly. P. Blakiston, Son, & Co., Publishers, Philadelphia. Vol. 1, Nos. 5 to 11; Vol. ii, Nos. 1, 3, 4. Exchange.

Medical, The, Summary. A monthly journal devoted to practical medicine, new preparations, etc. R. H. Andrews, editor and proprietor. Lansdale, Penn. Vol. iv, Nos. 3 to 12; Vol. v, Nos. 1, 2. Exchange.

Medical, The, and Surgical Reporter. A weekly

journal. Edited by D. G. Brinton. Vol. xlvi, Nos. 17, 22 to 25; Vol. xlvii; Vol. xviii, Nos. 1 to 4, 6 to 8. Exchange.

Michigan Medical News. A journal devoted to practical medicine, issued twice each month. J. J. Mulherron, editor and publisher. Vol. v, Nos. 10 to 24. Exchange.

Missouri, The, Dental Journal. A monthly record of dental science and art. St. Louis. C. W. Spalding, editor. Vol. xiv, Nos. 7 to 12; Vol. xv, Nos. 1, 2. Exchange.

Monthly, The, Review of Medicine and Pharmacy. R. V. Mattison. editor. Philadelphia. Vol. v, Nos. 5 to 12. Exchange.

Nashville, The, Journal of Medicine and Surgery. Edited by C. S. Briggs. Monthly. Vol. xxix, Nos. 5, 6; Vol. xxx; Vol. xxxi, Nos. 1 to 4. Exchange.

New Orleans, The, Medical and Surgical Journal. Edited by S. M. Bemiss, W. H. Watkins, S. S. Herrick. Monthly. Vol. ix, No. 12; Vol. x, Nos. 1 to 10. Exchange.

New York, The Medical Journal and Obstetrical Review. Edited by F. P. Foster. Monthly. Vol. xxxvi. Now weekly. Vol. xxxvii, Nos. 1 to 18. Exchange.

North Carolina Medical Journal. Thomas F. Wood, editor. Wilmington, N. C. Vol. ix, Nos. 5, 6; Vol. x, Nos. 1 to 4. Exchange.

Obstetric, The, Gazette. A monthly journal devoted to obstetrics, with diseases of women and children. E. B. Stevens, editor. Cincinnati. Vol. v, Nos. 6 to 12; Vol. vi, Nos. 2 to 4. Exchange.

Pacific, The, Medical and Surgical Journal. Editors and proprietors, Henry Gibbons, Henry Gibbons, Jr. Monthly. San Francisco. Vol. xxiv, No. 12; Vol. xxv, Nos. 1 to 9. Exchange.

Peoria, The, Medical Monthly. A practitioner's journal. T. M. McIlvaine, publisher Vol. iii, Nos. 2, 3.

Pharmacist, The, and Chemist. A monthly journal of pharmacy, therapeutics and allied sciences. R. H. Cowdry, editor. Chicago. Vol. xv. Nos. 5 to 12; Vol. xvi, Nos. 1 to 5. Exchange.

Philadelphia Medical Times. A bi-weekly journal of medical and surgical science. Edited by H. C. Wood. Vol. xiii, Nos. 386 to 403. Exchange.

Physician, The, and Surgeon. A monthly magazine devoted to medical and surgical science. Edited by V. C. Vaughan and five others. Ann Arbor, Mich. Vol. iv, Nos. 5 to 12; Vol. v, Nos. 1 to 4. Exchange.

Planet, The. A monthly journal of medicine, surgery and the collateral sciences. New York. Editor, C. E. Nelson. Vol. i, Nos 3, 4

Quarterly Journal, The, of Inebriety. Published under the auspices of the American Association for the Cure of Inebriates. Hartford, Conn. Vol. iv, Nos. 3, 4; Vol. v, Nos. 1, 2.

Quinologist, The. A monthly journal devoted especially to the dissemination of a more accurate knowledge of cinchona bark and its alkaloids. Philadelphia. R. V. Mattison, editor. Vol. iv, Nos. 1, 2, 3, 5.

Rocky. The, Mountain Medical Times. A monthly journal of medical, surgical and obstetrical science. Edited by T. H. Hawkins and F. A. Disney. Denver. Vol. i, Nos. 5, 6.

St. Joseph, The, Medical Herald. Edited by J. L. Geiger and F. C. Hoyt. Monthly. Vol. i, Nos. 1, 2, 3.

St. Louis Clinical Record. A monthly journal of medicine and surgery. Edited by W. B. Hazard. Vol. ix, No. 1.

St. Louis Courier of Medicine. Published monthly by J. H. Chambers & Co., for the Medical Journal Association of the Mississippi Valley. Vol. vii, No. 6; Vol. viii, Nos. 1, 2, 3, 6; Vol. ix, Nos. 2, 3, 4.

St. Louis, the, Medical and Surgical Journal. Thos. F. Rumbold, editor and proprietor. Monthly. Vol. xlii, Nos. 5, 6; Vol. xliii; Vol. xliv, Nos. 1 to 4. Exchange.

San Francisco Western Lancet. Editor, W. S. Whitwell. Monthly. Vol. xi, Nos. 5 to 8, 10 to 12; Vov. xii, Nos. 1 to 4. Exchange.

Sanitarian, the. A monthly magazine devoted to the preservation of health, mental and physical culture. A. N. Bell, editor, New York. Vov. x, Nos. 111 to 117. New series. Weekly. Vol. i, Nos. 1 to 18. Exchange.

Sanitary, the, News. The health journal of the Mississippi valley. Reed & Reed, editors and proprietors, Cincinnati, Ohio. Vol. ii, Nos. 4, 5, 6. Now under the title, "The Clinical Brief and Sanitary News." Old Vol. iii; new Vol. i, Nos. 1, 2. Exchange.

Southern Clinic, the. A monthly journal of medicine, surgery, and new remedies. C. A. Bryce, editor, Richmond, Va. Vol. i, Nos. 5 to 12: Vol. vi, Nos. 1 to 4. Exchange.

Southern, the, Medical Record. A monthly journal of practical medicine. Editors, T. S. Powell and others, Atlanta, Ga. Vol. xii, Nos. 6 to 12; Vol. xiii, Nos. 1 to 4. Exchange.

Southern, the, Practitioner. An independent monthly journal; devoted to medicine and surgery. D. J. Roberts and Duncan Eve, editors, Nashville, Tenn. Vol. iv, No. 11; Vol. v, No. 3.

Therapeutic, the, Gazette. A monthly journal, devoted to the science of pharmacology and to the introduction of new therapeutic agents. Wm. Brodie, editor, Detroit, Mich. Vol. iii, Nos. 6 to 12; Vol. iv, Nos. 1 to 4. Exchange.

Virginia, the, Medical Monthly. L. B. Edwards, editor and proprietor, Richmond, Va. Vol. viii, No. 10; Vols. ix, x, No. 1. Exchange.

Western, the, Medical Reporter. A monthly journal of practical medicine and surgery. J. E. Harper, editor and manager, Chicago. Vol. iv, Nos. 7 to 12; Vol. v, Nos. 1, 2. Exchange.

Working Bulletins; sent out by the scientific department of Parke, Davis & Co., Detroit, Mich. Donors—Parke, Davis & Co.

Rohé (G. H.) Some Points on the Administration of Anæsthetics. Baltimore, 1882. Donor, author.

Schultz (C. H.) The Mineral Water Controversy. New York, 1882. Donor, author.

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Societies—Australia.—New South Wales Royal Society Journal and Proceedings, Sydney. 8vo., vol. xv, 1881.

Belgium—Brussels.—L'Académie Royale de Médecine de Belgique Bulletin. 3mo. serie; tome xvi, Nos. 5 to 11; tome xvii, Nos. 1, 2. Exchange. Mémoires Couronnés et autres Mémoires publies fras. Tome vii, fasc. 2, 3. Exchange.

Liege.—Société Médico-Chirurgicale. Annales de la 21 Année, May to December, 1882; 22 Année, January to March. Exchange.

France.—Association Francaise pour l'avancement des Sciences. Compte Rendu, 9th Session, Reimos, 1880. Exchange.

Bordeaux.—Société de Pharmaice. Bulletin des Travaux, 22d Annèe. March to December. 23d Annèe. January, February. Exchange. Société des Sciences physiques et Naturelles, Mémoires 2d serie, tomes iv, v, No. 1.

Cherbourg—Mémoires de la Société Nationale des Sciences Naturelles et Mathematiques. Publiés sous la direction de M. Auguste de Jolis. Directeur et Archiviste-Perpetual; tome xxiii. Paris Cherbourg, Catalogue de la Bibliothéque de la Redigé pas M. Auguste de Jolier. Exchange.

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Société Chimique Bulletin: tomes xxxvii, Nos. 11, 12; xxxviii, xxxix, Nos. 1 to 8. Exchange.

Bulletin de L'Intandence, Annuaire du Corps de Contröle de l'Administration du Corps de L'Intendance, et du Corps des Officiers d'Administration des Bureaux de l'Intendance, des Substitances, des Hopitaux, de l'Habillement et du Campement de l'Armée Francaise. 1883, pp. 310.

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Erlangen.—Physikalisch-Medicinische Societät. Sitzungsberichte derselben. 14. Heft, Nov., 1881, to August, 1882, pp. 182. Exchange.

Giessen.—Oberhessische Gesellschaft für Natur-und Heilkunde, 21. Bericht, pp. 159. Exchange.

Munich.—Königlich-Bayerische Akademie der Wissenschaften. Sitzungsberichte der mathematisch-physikalischen Classe, 1882, Hefte ii, iii, iv, v. Exchange.

Gedächtnissrede auf Otto Hesse, gehalten in der öffentlichen Sitzung der K. C. Akademie der Wissenschaften zu München àm 28 März 1882, von Gustav Bauer, 1882, pp. 36.

Würzburg.—Physikalisch-Medicinische Gesellschaft. Sitzungsberichte derselben. Band. xvi. Exchange.

GREAT BRITAIN.

London.—Pathological Society. Transactions, vol. xxxiii., pp. 453. Exchange.

HOLLAND.

Amsterdam.—Köninklfki Akademie von Wetensohappen. Verslagen en Medededlingen. Dul xvi. Exchange.

ITALY.

Milan.—Reale Instituto Lombardo di Scienze e Lettere Rendiconti: serie ii., vol. xiv. Exchange.

RUSSIA.

Moscow.—Société Impérial des Naturalistes, Bulletin de la 1881, Nos. 3, 4; 1882, No. 1. Index to the first 56 volumes. Exchange.

SWITZERLAND.

Lausanne.—Société Vaudoise des Sciences Naturelles, Bulletin. Vol. xii., No. 85, 86; vol. xviii, No 87. Exchange.

St. Gallen.—Naturwissenschaftliche Gesellschaft. Bericht über die Thätigkeit 1880 to 1881. Exchange.

UNITED STATES.

American, the, Gynæcological Society Transactions. Vol. 6. Exchange.

American, the, Institute of Homœopathy. Transactions, 35th. Exchange. Address by the President of, W. L. Breyfogl. Pittsburgh, 1882.

American, the, Medical Association. Transactions, vol. xxxiii.

American, the, Pharmaceutical Association. Proceedings; vol. xxix. Exchange.

Arkansas.—State Medical Society. Minutes for 1881. Exchange.

California.—State Medical Society. Transactions, 1881, 1882. Exchange. Address before the Medical Society of California; Tyrrell, 1882.

Connecticut.—Medical Society: Proceedings of the annual convention, 1882. Exchange.

Delaware.—Medical Society. Proceedings for '79.

Iowa.—State Medical Society. Transactions, '79, 1880, 1881, '82. Exchange.

Kentucky.—State Medieal Society. Minutes, '79 and '80.

Maryland.—Medical and Surgical Faculty Transactions, '80, '82. Exchange.

Massachusetts.—Medical Society. Medical communications; '82, Exchange.

Michigan.—State Medical Society. Transactions, '79, '80, '81. Exchange.

Minnesota.—State Medical Association Transactions, 1882. Exchange.

Mississippi.—State Medical Association Transactions, 1880, 1881, 1882.

New Hampshire.—Medical Society Transactions, 1879, 1882. Exchange.

New Jersey.—Medical Society Transactions, 1882. Exchange.

New York.—(Brooklyn). Medical Society of the County of Kings, Proceedings, etc., Vol. vii, Nos. 3 to 7. Exchange. New York State Medical Society Transactions, 1882. Exchange.

North Carolina.—Conjoint Session of the State Medical Society and Board of Health, 1882. Exchange.

Oregon.—State Medical Society Proceedings, Vols. 2–9. Donor: Society.

Pennsylvania.—Philadelphia College of Pharmacy. Annual Report of the Alumni Association, 1882. Donor: Association. State Medical Society Transactions, Vol. vii, part 2, 1879; Vol. xiv, 1882. Exchange.

South Carolina.—Medical Association Transactions, 1882. Exchange.

Tennessee.—Medical Society Transactions, 1882. Exchange.

West Virginia.—Medical Society Transactions, 1879,

Wisconsin.—Medical Society Transactions, 1881. Exchange.

Statistics.—Norges Officielle Statistik, Besetning om Snndhed Stitstanden og Medicinal ferholdem Norge, 1875, 1876, 1877, 1878. Christiana. Donor: Direktoren for det Civile Medicinawæsen. Rhode Island, 27th Registration Report, 1879.

Synnestædt, (A. S. D.) and *Voss,* (J.) En Anatomisk Beskriodse af de paa over og Undesextremiteterne forekommende Bursæ Mucosæ. Prisbetunet Afhandlung Christiana, 1869. Donors: Authors,

Taliaferro, (V. H.) Application of Pressure in Diseases of the Uterus, etc. Reprint, Atlanta, 1882. Donor: Author.

Wile, (H.) Pathogenesis of Secondary Tumors. Reprint. Donor: Author.

Worm-Müller. Om Urinsyreno Forhold tit Kobberoxgdog Alkali. Christiana, 1881. Donor: Author.

LIST OF DELEGATES AND MEMBERS.

THE FOLLOWING IS THE OFFICIAL LIST OF DELEGATES AND MEMBERS IN ATTENDANCE UPON THE ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, IN CLEVELAND, JUNE, 1883.

ALABAMA.

Bullock County Medical Society.—Richard L. Butt.

Montgomery Medical and Surgical Society.—Wm. Owen Baldwin.

ARKANSAS.

State Medical Society.—John F. Blackman, James T. Jelks, James M. Keller, John J. McAlmont, F. G. McGavock, Edward Meek, Robert C. Prewitt, Henry H. Turner.

Permanent Members.—W. H. Hawkins, Daniel A. Linthicum.

CALIFORNIA.

State Medical Society.—Wm. M. Lawlor, Wm. Fletcher McNutt, Henry Sayre Orme.

San Bernardino County Medical Society.—Wm. R. Fox.

COLORADO.

State Medical Society.—H. K. Steele.

CONNECTICUT.

State Medical Society.—Geo. W. Avery, Curtis H. Bill, Benj. H. Comings, Chas. Gardiner, T. Morton Hills, Wm. C. Wile.

Fairfield County Medical Society.—A. E. Barber, Geo. L. Porter, G. A. Shelton.

Hartford County Medical Society.—John Alex. Stevens.

New Haven County Medical Society.—Lewis Baines Arnold, Chas. H. Pinney.

Permanent Member.—Wm. W. Welch.

DAKOTA.

Territory Medical Association.—J. B. Van Velsor.

DELAWARE.

State Medical Society.—Lewis P. Bush, Wm. Marshall.

DISTRICT OF COLUMBIA.

Medical Association of District of Columbia.—C. W. Franzoni, Alex. Y. P. Garnett, C. H. A. Kleinschmidt, William Lee, DeWitt C. Patterson, D. Webster Prentiss, Joseph Meredith Toner.

GEORGIA.

Georgia Medical Association.—Ely K. Bozeman, Henry F. Campbell, Eugene Foster, Lamartine G. Hardman.

ILLINOIS.

State Medical Society.—Charles C. Allen, Philip H. Burton, George W. Cox, Nathan Smith Davis, C. DuHadway, Lewis D. Dunn, Curtis T. Fenn, Rufus W. Gillett, B. M. Griffith, John H. Hollister, Herbert Judd, Elizabeth S. Norred, T, J. Pitner, Michæl Roney, Lucius G. Thompson.

Central District Medical Society.—Isaac W. Fink, William Hill.

Northern Central District.—Wm. O. Ensign.

Adams County Medical Society.—Abby Fox Roney.

Æsculapian Society of the Wabash Valley.—W. M. Chambers, Hulbert H. Clark.

Aurora Medical Society.—I. E. Bennett, Julius A. Freeman.

Brainard District Medical Society.—Joseph W. Newcomer, Charles H. Norred, Farinda J. Shipp.

Brown County Medical Society.—William M. Cox, George H. Tebo.

Chicago Medical Society.—W. W. Allport, Edmund Andrews, Willlam T. Belfield, Truman W. Brophy, Walter L. Dorland, E. C. Dudley, Ephraim Ingals, Frank S. Johnson, John S. Marshall, Liston H. Montgomery, Henry P. Newman, George Henry Randell, Arthur Rowley Reynolds, David A. K. Steele, Simon Strausser, Eugene S. Talbot, Wm. Porter Verity.

Cook County Medical Society.—Charles T. Parkes.

DeKalb County Medical Society.—George W. Nesbitt.

Fox River Valley Medical Association.—Charles N. Cooper.

Hancock County Medical Society.—Josiah R. Kelly.

McLean County Medical Society.—Thomas F. Worrell.

Military Tract Medical Association.—Samuel K. Crawford, Hugh Marshall, Madison Reece, Albert S. Slater.

Morgan County Medical Society.—T. M. Cullimore, Newton S. Read.

Peoria City Medical Society.—J. L. Hamilton, Wm. A. Johnston.

Polk County Medical Society.—Robert A. Patchin.

Vermilion County Physicians and Surgeons.—J. R. Livingood.

Whiteside County Medical Society.—Francis E. Melugin, S. Taylor.

Will County Medical Society.—David W. Jump, William M. Richards.

Winnebago County Medical Society.—D. Selwyn Clark, A. E. Goodman.

Permanent Members.—E. P. Cook, J. B. Davison, Chas. Warrington Earle, Christian Fenger, E. L. Griffin, Moses Gunn, Walter Hay, Edward W. Jenks, Hosmer A. Johnson, R. J. Patterson, John H. Rauch, C. V. Rockwell, Charles Gilman Smith, Adelbert H. Tagert.

INDIANA.

State Medical Society.—W. W. Arnold, Ferdinand W. Beard, Lavanner Corey, Elmer E. Glover, Alonzo H. Good, James S. Gregg, Myron H. Harding, Thomas B. Harvey, James F. Hibberd, Timothy T. Linn, H. D. Reasoner, Marshall Sexton, Thaddeus M. Stevens, George Sutton, L. D. Waterman, J. C. Webster, J. R. Weist, H. D. Wood, T. F. Wood, B. S. Woodworth.

Adams County Medical Society.—W. A. Byrd, Benjamin R. Freeman.

Allen County Medical Society.—G. L. Greenawalt, W. H. Myers.

Blackford County Medical Society.—Henry C. Davisson.

Boone County Medical Society.—Carter H. Smith.

Cass County Medical Society.—Wm. H. Bell.

Dearborn County Medical Society.—Thomas E. Craig, Wm. C. Henry.

Decatur County Medical Society.—Joel T. Tevis.

Delaware County Medical Society.—W. J. Boyden, G. W. H. Kemper.

Elkhart County Medical Association.—H. T. Montgomery, Chelius S. Pixley, James Anderson Work.

Fayette County Medical Society.—Vincent H. Gregg.

Floyd County Medical Society.—Elihu P. Easley.

Grant County Medical Society.—Alpheus Hendry, Wm. Lomax, John S. Sprowl.

Hancock County Medical Society.—Noble P. Howard.

Henry County Medical Society.—George W. Burke, Elihu S. Mendenhall.

Howard County Medical Society.—William Scott.

Jay County Medical Society.—Christopher S. Arthur.

Johnson County Medical Society.—Jacob A. Marshall, William M. Province.

LaGrange County Medical Society.—H. M. Casebeer, William H. Short.

Madison County Medical Society.—John W. Hunt, John W. Perry.

Marion County Medical Society.—Frank M. Ferrel, Charles D. Pearson, James L. Thompson.

Miami County Medical Society.—Edmund M. Bloomfield.

Morgan County Medical Society.—H. W. Care.

Noble County Medical Society.—Joseph L. Gilbert, Salathiel T. Williams.

Pulaski County Medical Society.—Harris E. Pattison, G. W. Thompson.

Randolph County Medical Society.—Lewis N. Davis.

Rush County Medical Society.—Samuel N. McMahon.

Tippecanoe County Medical Society.—William S. Walker.

Wabash County Medical Society.—Perry G. Moore, Laughlin O'Neal.

Wayne County Medical Society.—Jas. T. Courtney.

Permanent Members—R. T. Blount, George T. Bruebach, Jacob B. Casebeer, Marcus F. Crain, George W. Crapo, George H. Dayton, Joseph L. Hagerty, John H. Helm, C. B. Higgins, Joseph Iutzi, L. S. Keene, John E. Link, Charles R. Mason, Theophilus Parvin, Landon C. Rose, Christian B. Stemen, Norman Teal.

IOWA

State Medical Society.—Lyman J. Adair, William Henry Baxter, W. H. Christie, Benton H. Crilley, Charles W. DeMotte, W. Eastman, L. S. Groves, Gershom H. Hill, Jonathan H. Kersey, Benjamin McClure, John North, Washington F. Peck, A. B. Reed, George Warne, Ira L. Welch, Frank A. Xanten.

Central Medical Association.—Wm. Beckford Kibbey.

Buchanan County Medical Society.—Griffy Benjamin Ward.

Delaware County Medical Society.—Charles C. Bradley, Benjamin H. Reynolds.

Dubuque Medical Society.—George Minges.

Fayette County Medical Society.—James W. McLean.

Jackson County Medical Society.—Asa B. Bowen.

Muscatine County Medical Society.—W. S. Robertson.

Polk County Medical Society.—Robert A. Patchin, David W. Smouse, Arthur Leland Worden.

Scott County Medical Society.—James Gamble, John Knox.

Sioux City Medical Society.—B. A. Guyton, Jr.

Permanent members—J. A. Blanchard, Lewis Blanchard, Elbert W. Clark, J. C. Hughes, Nathan Udell, F. A. Weir, Jefferson Williamson.

KANSAS.

State Medical Society.—R. D. Adams, L. J. Cunkle, Andrew L. Fulton, H. O. Hanawalt, Harvey D. Hill, Luther D. Jacobs, Winfield Scott Mendenhall, C. V. Mottram, Shaw F. Neely, George H. Picard, W. L. Schenck, Chas. F. Smolt, D. W. Stormont.

South Kansas Medical Society.—Jacob Danforth Sherrick. Permanent members—J. A. Coons, Woodman M. Shean.

KENTUCKY.

State Medical Society.—A. Crawford, Sidney A. Foss, Thomas B. Greenley, C. P. Mattingly, Louis S. McMurtry, J. P. Thomas, Wm. H. Wathen.

LOUISIANA.

State Medical Society.—James William Dupree. Permanent member—Tobias G. Richardson.

MAINE.

State Medical Society.—Seth C. Gordon.

Androscoggin County Medical Society.—Alonzo Garcelon. Permanent members: Andrew J. Fuller, S. H. Weeks.

MARYLAND.

Medical and Chirurgical Faculty.—William Lee, John Morris, Joseph F. Perkins, Henry T. Rennolds, Wm. Whitridge.

Baltimore Academy of Medicine. — Julian J. Chisolm.

Clinical Society of Baltimore.—Alan P. Smith.

MASSACHUSETTS.

State Medical Society.—Wm. Bass, Edward C. Briggs, William Norton Bullard, John Henry Gilman, John Alexander Gordon, Charles Harrington, A. F. Holt, Levi Howard, Francis A. Howe, Henry O. Marcy, Henry A. Martin, Moses Greeley Parker, Charles A. Savery, Charles B. Shute, Fred. W. Webber, Arthur Henry Wilson.

Worcester North District Medical Society.—Robert Foster Andrews. Permanent members: Theodore Giddings, John Carroll Irish, L. F. Warner, Joseph H. Warren, Jacob L. Williams.

MICHIGAN.

State Medical Society.—Josiah Andrews, Casper V. Beebe, James B. Book, William Brodie, Leartus Connor, William L. Dickinson, Samuel P. Duffield, Simeon S. French, Allen F. Hagadorn, William J. Herdman, Charles H. Lewis, Charles J. Lundy, Donald McLean, Hugh McColl, James D. Munson, Frank King Owen, Alonzo B. Palmer, Foster Pratt, George E. Ranney, A. P. Smart, W. N. Smart, Eugene Smith, Charles T. Southworth, Henry O. Walker, Harvey Williams, Hal C. Wyman.

Northern Michigan Medical Society.—Norman E. Bachman, H. B. Barnes, Charles W. Martin, Donald A. McLean, Alva Winslow Nichols, Louis A. Roller.

Northeastern District Medical Society.—William Brownell, Henry J. Reynolds, J. E. Wilson, Albert Yates.

Southern Michigan Medical Society.—John F. Jenkins, Dayton Parker, Harman Peters, William Scriber, Julius Vaughan, Arvin F. Whelan.

Ann Arbor Medical and Surgical Society.—Geo. E. Frothingham, Victor C. Vaughan.

Bay County Medical Society.—Fred. D. Hiesordt.

Regular Bay County Medical Society.—Horace Tupper.

Calhoun County Medical Society.—Kate Lidsay.

Cass County Medical Society.—Wm. J. Kelsey, Horace E. Phillips.

Detroit Academy of Medicine.—James F. Noyes.

Detroit Medical Association. — James Hawley Bache, Albert E. Carrier, Alfred N. Hawes, Frederick W. Owen, Orville Ward Owen.

Flint Academy of Medicine.—James Neelands Buckham, Henry C. Fairbank, Almon A. Thompson.

Grand Rapids Medical Society.—Arthur Hazlewood, Perry Schurtz.

Kalamazoo District Medical and Surgical Association.—Henry B. Hemenway, Helen M. Upjohn Kirkland, James W. Sacket, Jerome V. Snook.

Van Buren County Medical Society. — Ezra A. Palmer.

Wayne County Medical Society.—Andrew B. Chapin, John E. Clark, Charles P. Frank. Permanent members: Henry B. Baker, Isaac E. Brown, Carl Brumme, J. Henry Carstens, Edward S. Dunster, J. M. Eliott, Thomas Updegraff Flanner, Joseph B. Griswold, Homer O. Hitchcock, Amy Garrison Kimball, Theophilus J. Langlois, Wm. J. McHench, Thomas Noble Reynolds, Jabez Perkins, Gilbert S. Rose, Marden Sabin, Hamilton E. Smith, Edward S. Snow, C. E. Spencer, Robert Stephenson, Cyrus M. Stockwell, Chester S. Tucker, Edgar B. Ward.

MINNESOTA.

State Medical Society.—Alonzo T. Conley, James H. Dunn, Frederick A. Dunsmoor, Wm. D. Flinn, Eugene A. Hutchins, Philo E. Jones, Daniel Leasure, Samuel W. McEwen, J. H. Murphy.

Minneapolis Society of Physicians and Surgeons.—James E. Moore.

Ramsey County Medical Society.—John F. Fulton.

St. Croix Medical Society.—Perry H. Willard. Permanent members: Josephus Craft, Alexander J. Stone.

MISSISSIPPI.

State Medical Society.—Eugene Paul Sale, J. A. Shackelford.

MISSOURI.

State Medical Society.—George C. Catlett, John W. Jackson, Thomas B. Lester, G. M. B. Maughs, E. W. Schauffler.

Linton District Medical Society. — William H. Douglas.

Northwest Missouri Medical Society.—George C. Brown, Thomas W. Doyle, Rufus H. Smith.

Southeast Missouri Medical Society. — Alpheus Alonzo Bondurant.

Kansas City Medical Society. — M. A. Bogie, George Halley, A. B. Sloan.

Saline County Medical Association.—C. Lester Hall.

St. Louis Medical Society.—Edw. Borck, Charles

H. Hughes, Isaac Love, S. Pollak, William Porter, Thomas F. Rumbold, Charles W. Stevens.

St. Louis Medico-Chirurgical Society. - Elisha H. Gregory, William C. Glasgow, Theo. F. Prewitt. Permanent members: Henry Hodgen Mudd, Alexander J. Mullen.

NEBRASKA.

State Medical Society.—Sylvester J. Bridenstine, Victor H. Coffman, William L. Dayton, Napoleon B. Larsh, Samuel D. Mercer, Richard C. Moore, George M. Prentice, Melville W. Stone, E. M. Whitten.

NEW HAMPSHIRE.

State Medical Society.—Frank T. Moffit.

NEW JERSEY.

State Medical Society.—Samuel Johnson, B. A. Watson.

Camden County Medical Society.—Dillwyn P. Pancoast.

Essex County Medical Society.—Fayette Smith.

Hudson County Medical Society.—Isaac N. Quimby.

Morris County Medical Society.—Chas. Y. Swan.

NEW MEXICO.

Las Vegas Medical Society.—Madison Monroe Milligan, Wm. Reuben Tipton.

NEW YORK.

Central New York Medical Association.—Wm. F. Sheehan.

Broome County Medical Society.—John G. Orton.

Chautauqua County Medical Society.—Burr Schermerhorn.

Chenango County Medical Society.—Elijah S. Lyman.

Cortland County Medical Society.—Frederick Hyde.

Erie County Medical Society.—George N. Burwell, J. B. Coakley, Floyd S. Crego, Charles C. F. Gay, Henry R. Hopkins, Herman Mynter, William Ring.

Kings County Medical Society.—E. A. Lewis.

Montgomery County Medical Society.—Salphronius H. French, James A. Smeallie.

Monroe County Medical Society.—Julius J. Kemp, Byron I Preston, F. G. Sherwood.

New York Academy of Medicine.—John Glover Adams, William B Anderton, William N. Blakeman, Stacy B. Collins, Frederic Shepard Dennis, Austin Flint, Austin Flint, Jr., J. W. S. Gouley, Samuel T. Hubbard, John H. Hinton, Nathaniel C. Husted, Joseph C. Hutchison, Edward A. Judson, Charles A. Leale, Ramon L. Miranda, John P. Munn, Henry D. Nicoll, Henry D. Noyes, Ira B. Read, Lewis Hall Sayre, William T. White, Charles S. Wood, William Young.

Niagara County Medical Society.—Daniel St. Clair Campbell, M. S Kittinger.

Onondaga County Medical Society.—Henry D. Didama, Henry L. Elsner, Nathan Jacobson, John Van Duyn.

Queens County Medical Society.—Peter Y. Frye, Darling B. Whitney.

Rensselær County Medical Society.—Charles S. Allen, Richard D. Traver.

Permanent Members:—Agrippa Nelson Bell, Geo. H. Bennett, Reed B. Bontecou. Chas. W. Brown, J. H. Hobart Burge, James R. Fairbanks, J. Cowper Harman, Edward Coke Harwood, Morris H. Henry, W. C. Jarvis, W. J. Kingsley, Edward M. Moore, Robert Newman, Wm. W. Potter, Thomas F. Rochester, John O. Roe, Smith A. Skinner, James R. Taylor.

NORTH CAROLINA.

State Medical Society.—Eugene Grissom, Charles W. Woollen.

OHIO.

State Medical Society.—J. H. Ayers, John N. Beach, D. D. Bramble, Forrest W. Brayton, A. H. Brundage, T. J. Burton, O. M. Corson, John M. Crafts, Howard Culbertson, N. Pendleton Dandridge, John O. Dawson, H. J. Donahoe, James A. Duncan, Alexander Dunlap, Charles B. Ferrell, Leander Firestone, Alfred Follett, Silas W. Fowler, P. S. Greenamyer, J. W. Hamilton, E. B. Harrison, Benj. F. Hart, H. J. Herrick, Sol. B. Hiner, Wayland S. Hough, E. W. Howard, E. H. Wyatt, William C. Jacobs, O. Johnson, J. D. Jones, Richard E. Jones, Toland Jones, A. T. Keyt, Henry G. Landis, Chauncey P. Landon, Josiah W. Lash, Millard F. Lee, B. B. Leonard, S. L. McCurdy, S. McElwee, John W. McMillen, Wm. H H. Nash, H. C. Pearce, W. H. Philips, Theodore W. Rankin, John Charles Reeve, Thaddeus A. Reamy, John H. Rodgers, E. S. Russell, Joseph Sager, Wm. D. Scarff, Xenophon C. Scott, W. J. Scott, D. R. Silver, Edwin Sinnett, Daniel B. Smith, James W. Smith, R. L. Sweeney, L. G. Thacker, J. C. Thompson, James M. Weaver, R. Wirth, Lafayette Woodruff.

Central Ohio Medical Society.—Henry G. Cornwell, Thomas W. Jones, Wm. McIntire.

North Central Ohio Medical Society.—Reason S. Boles, P. H. Clark, D. R. Francis, Benjamin Franklin Harvey, Wm. Loughridge, J. F Markel, James N. Pocock, R. Harvey Reed.

Northeastern Ohio Medical Association.—W. T. Barnes, Joseph E. Barrett, W. S. Battles, A. P. Beach, A. C. Belden, S. A. Conklin, James E Dougherty, J. W. Ferguson, James Fraunfelter, Abram H. Hunt, Frank S. Jones, Milo M. Moody, Samuel Pixley, L. J. Proehl, Thomas J. Reed, Albert W. Ridenour, A. M. Sherman, G. L. Starr, Alanson G. Willey, George H. Wuchter.

Northwestern Ohio Medical Association.—Charles E. Beardsley, F. D. Bain, W, R. Bricker, Oshea S. Brigham, Thomas Cosgrove, I. Rush Evans, Samuel F. Forbes, Harrison Hathaway, J. N. Hetzler, Manford M. Hixson, Warren F. Reed, Samuel S. Thorn, Samuel S. Yoder.

Ashland County Medical Society.—Thomas S. Hunter, Benjamin Myers.

Athens County Medical Society.—Henry C. Allen.

Bay City Medical Society (Sandusky).—A. J. Gawne.

Brown County Academy of Medicine.—Thomas Winston Gordon, Samuel B. Sheldon.

Butler County Medical Society.—John Cass, John Corson, C. H. von Klein.

Champaign County Medical Society.—James M. Cosgrove, Samuel M. Mosgrove, Lemuel Monroe Norman

Cincinnati Academy of Medicine.—William Glendenin, James M. French, A. E. Heighway, Philip Zeuner.

Cincinnati Medical Society.—Joseph Eichberg, O. D. Norton, Jr., William H. Taylor.

Clermont County Medical Society. — Isaac Redson.

Cuyahoga County Medical Society.—Erasmus D. Brooks, Lewis Buffett, Wm. H. Humiston, H. H. Powell, L. B. Tuckerman, J. D. Wittenmyer.

Defiance County Medical Society.—M. B. Stevens.

Delamater Medical Society.—A. L. Osborne, A. B. Storch.

Delaware County Medical Society.—Sebastian Cabot Dunn.

Erie County Medical Society.—Elwood Stanley.

Fulton County Medical Society.—David O. Fruth.

Hempstead Academy of Medicine.—R. M. Gibson, E. S. Ricketts.

Highland County Medical Society.—W. W. Shepherd.

Jefferson County Medical Society.—Benjamin H. Fisher, M. D. Hill.

Knox County Medical Society.—Frank C. Larimore, Thomas B. Miser, Peter Pickard, John W. Russell, Baldwin B. Scott.

Lawrence County Medical Society.—Oscar B. Dunn, Jonathan Morris, William Finley Wilson.

Lewes County Medical Society.—A. R. McKeller.

Logan County Medical Society.—W. H. Cretcher, W. S. Philips, Daniel Watson.

Macoupin County Medical Society.—Alexander Brown Penniman.

Mahoning County Medical Society.—Myron S. Clark, Robert D. Gibson, H. H. Hawn, John McCurdy.

Marion County Medical Society.—Frank W. Thomas.

Meigs County Medical Society.—Caleb R. Reed.

Medical and Chirurgical Society of East Ohio.—Carl Ernst Kurz.

Miami County Medical Society.—J. F. Gabriel.

Montgomery County Medical Society.—Alonzo Boone, Thomas L. Neal.

Portage County Medical Society.—Emmett W. Price, George M. Proctor.

Ross County Medical Society.—Gustavus Scott Franklin.

Sandusky County Medical Society.—Wm. Caldwell, Martin Shannon.

Shelby County Medical Society.—P. Beeman, William R. Keoe, Thomas H. Phillips.

Stark County Medical Society.—Wm. C Portmann, Alonzo B. Walker.

Summit County Medical Society.—Charles M. Milliken.

Toledo Medical Association.—George A. Collamore.

Trumbull County Medical Society.—Julian Harman, S. H. Smith, John R. Woods.

Tuscarawas County Medical Society.—W. McKean.

Union Medical Society of Colorado County, etc. E. W. Brooke, W. C. Foulks.

Wayne County Medical Society.—Joseph H. Todd.

Williams County Medical Society.—J. G. Cameron.

Zanesville Medical Society.—William H. Holden, Wm. C Lenhart, Asa C. Oatley.—Permanent members: A. Ball W. Morrow Beach, John Bennitt, A. C. Brant, Andrew J. Brockett, W. Bunce, Albert J. Cook, H. K. Cushing, C. F. Dutton, Alexander J. Erwin, Nathan S. Everhard, J. P. Henderson, Elbridge G. Hard, Joseph Helmick, C. C. Hildreth, Isaac N. Hines, John G. F. Holston, S. Hudson, R P. Johnson, W. W. Jones, C. W. Lyman, F. C. McConnelly, Thos. McEbright, Akin C. Miller, James C. Mortland, Landon Spray Murray, O. D. Norton, A. V. Patterson, George S. Peck, P. P. Pomerene, Joseph Ransohoff, Albert N. Read, R. C. Stockton Reed, John H. Rheinfrank, R. H. Rice, William T. Ridenour, Andrew J. Scott, J. W. Shively, Charles E. Slocum, Thomas H. Stewart, J. W. Townsend, J. H Tressel, W. J. Underwood, Joseph Waggoner, Elkanah W. Williams, John E. Woodbridge.

OREGON.

State Medical Society.—Robert George Rex.

PENNSYLVANIA.

State Medical Society.—A F. Balmer, Robert A Campbell, Richard J Dunglison, Thomas J. Gallaher, M. L. Herr, George Firman Horton, Harvey Kratz, Abner M Miller, M. Pickett, Shallus R. Rutledge, N. F. Schwartz, John C. Sheridan, Henry H. Smith, James B. Tweedle, Isaiah J. Wireback

Allegheny County Medical Society.—John M. Batten, R. H. Gilliford, John J. Green, David A Hengst, John Kirker, Ferdinand Koeller, J. Chris. Lange, F. LeMoyne, James B. Murdoch, Alex. M. Pollock, W. Snively, R. S. Sutton

Armstrong County Medical Society.—M. H. Alter, J. G Cunningham

Beaver County Medical Society.—Jefferson Henry Wilson.

Blair County Medical Society.—W. R. Finley, Andrew S. Stayer.

Bradford County Medical Society.—Ezra P. Allen.

Butler County Medical Society.—Joseph S. Lusk, Abraham Markle Neyman.

Cambria County Medical Society.—Irving C. Blaisdale, W. B. Madden.

Carbon County Medical Society.—Rensselaer Leonard.

Chester County Medical Society.—Isaac Massey.

Clarion County Medical Society.—S. F. McComb, Alexander M. Reid.

Crawford County Medical Society.—Ellis M. Farrelly.

Cumberland County Medical Society —Wm. G. Stewart.

Dauphin County Medical Society —Jerome Z. Gerhard.

Delaware County Medical Society —S P. Bartleson, Isaac N. Kerlin, William B. Ulrich.

Elk County Medical Society.—A. Miner Straight, Walter L Williams.

Erie County Medical Society.—Thomas H. Gray, H. O. Mackrees.

Fayette County Medical Society.—S. Buttermore, Isaac C. Hazlett, John W. Worrell.

Franklin County Medical Society.—John Montgomery

Indiana County Medical Society.—William Anderson, John W. Hughes.

Jefferson County Medical Society —W. F. Matson, W. W. Woods.

Lackawanna County Medical Society.—Wm. H. Heath.

Lancaster County Medical Society.—Francis G. Albright, A. S. Brubaker, Alexander Craig, J. Aug. Ehler, Thomas W. Kay, F. M. Mussey, John A. Thomson, J. L. Ziegler.

Luzerne County Medical Society.—Jonathan E. Bulkeley, John B. Crawford, Harry Hakes.

McKean County Medical Society.—George E. Benninghoff, Wm. A. Hobday, Henry Wilson.

Mercer County Medical Society.—T. H. Fulton, L G Meyer, Laird N. Woods.

Mifflin County Medical Society.—James M. Brown.

Montgomery County Medical Society.—J. O. Knipe.

Northampton County Medical Society.—Traill Green.

Philadelphia County Medical Society.—Walter F. Atlee, Ross R. Bunting, Leonardo S. Clark, J. Solis Cohen, Albert Fricke, Samuel W. Gross, N. L. Hatfield, Charles B. Nancrede, William T. Taylor, Laurence Turnbull, James Tyson, Frank Woodbury.

Schuylkill County Medical Society.—Thomas J. Birch, D. Webster Bland, Phaon Hermany.

Susquehanna County Medical Society.—A.T. Brundage, Elijah N. Smith.

Venango County Medical Society.—F. F. Davis, George W. Dille, B. F. Hamilton, T. C. McCulloch.

Warren County Medical Society.—Julius L. Burroughs, Morris L. Guth.

Washington County Medical Society.—H. H. McDonough, Joseph McElroy, James G. Sloan.

Westmoreland County Medical Society.—James L. Crawford, James I. Marchand, F. L. Marsh, John E. Rigg, John Q. Robinson.

York County Medical Society.—Isaac C. Gable, Jacob Hay, M. J. McKinnon, Samuel J. Rouse, John Wiest, George P. Yost. Permanent members: W. J. Arsdale, W. B. Atkinson, John L. Atlee, George W. Barr, Henry M. Bishop, S. L. Blachly, A. D. Brewster, A. V. Chessrown, A. T. Clark, James G Connell, Joseph F. Cottrell, Robert Crawford, William Hudson Daly, Emery G. Drake, Thad. W. Egbert, William C. Evans, W. M. Findley, Samuel Graham, Samuel D. Gross, Salem Heilman, George L. Humphreys, W. S. Huselton, C. B. Kibler, Wm. F. Knox, S. S. Koser, John G. Lee, George A. Linn, J. A. Lippincott, James Benjamin Livingston, Thomas M. Livingston, John R. McClurg, Robert McConaughy, W. H. McKelvy, Beriah E. Mossman, George W. McNeil, George G. Rahauser, D. N. Rankin, J. A. Ritchey, S. M. Ross, Joseph D. Schoales, Carl Seiler, A H. Sheaffer, G. M. Shillito, John V. Shoemaker, J. L. Stewart, Alvin Thayer, G. Thickstun, Joseph D. Thomas, William Varian, J. S. VanVoorhis, William Wallace, W. Lowrie Whaun, Roger Williams, Charles B. Wood.

RHODE ISLAND.

State Medical Society.—Ariel Ballou, D. Homer Batchelder.

SOUTH CAROLINA.

State Medical Society.—R. A. Kinloch, Thomas J. McKee, Thomas H. Phillips.

TENNESSEE.

State Medical Society.—Wm. Thompson Briggs, J. M. Coyle, Paul Fitzimons Eve, Deering J. Roberts, A. B. Tadlock, Andrew J Weldon. Permanent member: James Dease Plunket.

TEXAS.

State Medical Society.—Hiram H. Darr, Henry Clay Ghent, M. D. Knox, R. B. White.

VERMONT.

State Medical Society.—Charles W. B. Kidder.

VIRGINIA.

State Medical Society.—William Henry Coggeshall, Francis D. Cunningham, Hunter McGuire.

Northeast Virginia Medical Society.—Alexander Harris, Thomas M. Hughes.

WEST VIRGINIA.

State Medical Society.—Wyckliffe K. Carter, Sample Ford, Rezin W. Hall, James M. Lazzell, George B. Moffett, James E. Reeves, L. D. Wilson.

City of Wheeling and County of Ohio Medical Society.—H. Byron Baguley, Charles M. Frissell. Permanent members: Newton D. Baker, L. C. Hunt, J. E. Kendall.

WISCONSIN.

State Medical Society.—E. L. Boothby, N. Monroe Dodson, William Eastman, William Fox, Samuel C. Johnson, David LaCount, John G. Meachem, Jr., John S. Walbridge, R. M. Wigginton.

Northwestern Inter-State Medical Society.—C. Alexander.

Southwest Wisconsin Medical Society.—F. P. Casey.

Milwaukee County Medical Society.—Horace Manchester Brown, Samuel W. French.

Verein Deutscher Ærzte in Milwaukee.—Nicholas Senn. Permanent members: John K. Bartlett, Solon Marks.

UNITED STATES ARMY MEDICAL DEPARTMENT.

John S. Billings, W. H. Forwood, Joseph R. Smith.

UNITED STATES NAVY MEDICAL DEPARTMENT.

John Mill Browne, Albert Leary Gihon.

UNITED STATES MARINE HOSPITAL SERVICE.

John B. Hamilton, Truman W. Miller.

CANADA.

Canadian Medical Association.—William Osler, T. R. Roddick.

Ontario and Dominion Medical Association.—Thomas J. Harrison.

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THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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CHICAGO, ILLINOIS

SATURDAY, DECEMBER 29, 1883.

EXPLANATIONS.—The present number closes the first volume of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

It was the original intention to have the JOURNAL commence the first week in July, that the volumes might represent the even half years, commencing with July and January of each year. Owing to unavoidable causes, the first number was not issued until the second week in July, and consequently this volume closes with the 25th instead of the 26th number.

In commencing a work of such magnitude as this, we expected to meet with embarrassments that would subject us and our work to more or less criticism, and in this respect we have not been disappointed. To publish and distribute three or four thousand copies of a journal of this size each week, not only requires a printing establishment containing an ample supply of type and corps of compositors, but also a well-trained and efficient foreman, a skilled proof-reader, and a well-drilled corps of folders, stitchers, wrappers and mailers.

To say that our excellent publisher, though possessed of an ordinarily well appointed and reliable printing establishment, was not provided with these last-named requisites, is doing him no injustice, simply because he was not previously publishing anything requiring such service. Consequently, every issue showed some defect that ought to have been avoided by more skill in the foreman, and more care on the part of the proof-reader, and so much time would be consumed in the folding, wrapping, etc., as to make each number reach its readers much behind its date. The remedying of these defects has required some patience, and the greater part of the past six months of time. That they have been substantially removed, and that our publisher's machinery is now in very good working order, the appearance of the last three or four numbers of the JOURNAL fully proves. And our publisher enters upon the work of the new year and the second volume with a well-qualified foreman, a professional proof-reader, a well-drilled corps of folders, wrappers, etc., and with a supply of type that will enable us to give the author of every important original paper an opportunity to examine the proof sheets for himself, provided he does it with a reasonable degree of promptness.

When the Board of Trustees made its report to the meeting of the Association in Cleveland last June, and the publication of the JOURNAL was ordered, only about 2,000 pledges of support had been obtained, and it was estimated that the result of the Cleveland meeting would probably add 500 more, giving a list of 2,500 paying members and subscribers to constitute the list of supporters at the beginning of our enterprise. Relying upon this basis, it was thought safe by the Board, at its last meeting, to commence the publication with an edition of 3,500, or 1,000 in excess of the expected actual basis of support. But the first three numbers had not been issued, before it became evident that the number just stated would not be sufficient, and the edition was increased to 3,800; and now, at the end of the first six months, the actual circulation is, in round numbers, 3,600. Not anticipating so great an increase, we allowed some copies of numbers one and two to be sent out as specimens, and a liberal supply of number seven to some of the writers whose papers were contained in it. This resulted in the necessity of reprinting number one several weeks since, and number seven more recently. The latter number has been withheld from nearly all those whose names have been sent to us during the last few weeks, but it will be supplied to all within the next ten days.

When the present copy reaches its readers, it will be a special accommodation to us, if each one will carefully examine his file from the beginning, and send us at once, on a postal card, notice of whatever numbers are *missing*, or materially imperfect, and we will take pleasure in supplying them without charge, that all who are entitled to the present volume may have it as complete as possible, before the surplus numbers are packed up and put out of the way. And if any parties chance to have duplicate copies of numbers *two* and *six*, they will confer a favor by mailing them to us.

The title page and index are printed and so stitched in the middle of the present number, that the binder can loosen and remove them to their proper places in the volume when the binding is done.

We shall continue to furnish a complete file of the JOURNAL to members of the Association whose names are sent to us by the Treasurer, as having paid their membership dues for 1883, but all new subscribers who are not members should have their subscriptions commence with the second volume, January 1, 1884.

We have made the foregoing statements simply because we thought they would be of interest, especially to members of the Association. Thus far, instead of being annoyed, we have endeavored to profit by the criticisms bestowed upon our work, while we have been comforted and encouraged by the words of approval that have accompanied almost every remittance from our subscribers. If there are any who envy us our position and think they could have performed its duties better, we only wish they could have had the opportunity to try.

CORRECTIONS:—We take pleasure in copying the following notes, which will explain themselves:

DECEMBER 22, 1883.

Mr. Editor:—In your issue of December 15, there was a review of the Annual Report of the Supervising Surgeon-General of the Marine-Hospital Service for the year 1883, in which the reviewer has fallen into an error, evidently due to his misapprehension of the system employed in reporting autopsies. On page 685, first column of your journal, he has noted a case, reported on page 229 of the Report, in which he states there was "no diagnosis." For the benefit of those who may fall into the same error, it seems proper to state that there are reported several autopsies of patients dying from the same disease, each of which is serially numbered. He will find that the case to which he alludes is No. 8 of the series of "Diseases of the Heart," the first of which is on page 227 of the Report.

Very Respectfully,
CHAS. E. BANKS, *P. A. Surgeon, M. H. S.*

DECEMBER 24, 1883.

EDITOR OF JOURNAL OF AMERICAN MEDICAL ASSOCIATION.

Dear Sir:—In your issue of the 15th inst., page 683, the reporter in the discussion about jequirity in the Chicago Medical Society, has so seriously misquoted me that I must in justice to myself ask of you to correct it. I am represented as saying that "a small quantity of hyd. chl. cor. would increase the efficiency of the remedy." I stated that the inflammation and consequent advantage was unquestionably due to the presence of bacteria, and that an interesting observation would be to know whether the infusion made with a weak solution of bichloride of mercury would destroy its action.

Yours truly,
R. TILLEY, M. D.

NEW INVENTIONS.

A SENSITIVE THERMOSTAT.—Dr. N. A. Randolph (*Journal of the Franklin Institute*) has simplified the principle of the Bunsen gas regulator as modified by Geissler, by making the diaphragm in the test-tube, of a tight-fitting rubber cork, between the diaphragm and the mercury, which, in an ordinary test tube of 6 by 1 inch, occupies 1¼ inches, he has a layer of 2 inches of rectified alcohol; this increases its sensitiveness, as the alcohol can only expand downward, and consequently drives the mercury up through the little glass tube which pierces the diaphragm and passes to within ⅛ of an inch of the bottom of the test-tube. The arrangement of the instrument for use would suggest itself to all who have used the gas regulator—that of a second rubber cork with two openings to close the test-tube, provided also with tubes, one a short one passing into the upper chamber so made and communicating with the rubber tubing of the burner, and the other longer, connecting directly with the gas supply, and provided with little openings which can be influenced by the mercurial column. Dr. Randolph provides the central tube also with a flared, funnel-shaped extremity, nearly half an inch in width, which receives the upper long tube and controls the spread of the end of the expanding mercury. The simplicity of this instrument is as much in its favor as its effectiveness, as it can be made in the laboratory by any student.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting December 6, 1883, the President, R. A. Cleemann, M.D., in the chair.

Dr. W. Goodell exhibited two cysts of the parovarium, and remarked: Both patients got well; he indeed had never lost a patient from whom he had removed a parovarian cyst. In both cases a correct diagnosis was made previous to the operation. One interesting diagnostic point was the complete absence of the facies ovariana. The color in the cheeks was good, and the countenance was free from the anxious expression present in cases of ovarian tumor. One tumor had existed for ten years, the other for one. Another important point in the differential diagnosis is not only the flaccidity of the tumor, but its variable degrees of flaccidity. Upon inspection, it is seen to reach to the sternum, and seems to occupy a large portion of the abdominal cavity; but when the hands are placed upon its sternal edge, it can be compressed to the level of the umbilicus. An ovarian cyst, on the contrary, is hard and uncompressible. Exceptions to this rule are very rare; that is, either a tense parovarian cyst or a flaccid ovarian one. A

third important distinguishing point is the long time —ten years in one case—which the tumor existed, and, further, without marked deterioration of health. After being tapped, these tumors usually refill, but occasionally they do not, and a cure is thus brought about. The fluid withdrawn has been in every case limpid, and generally colorless, but it has sometimes had, in his experience, an emerald tint. These tumors are generally free from serious adhesions, but if in an operation for the removal of one, adhesions should exist where for any reason their forcible separation would be unavoidable, or the cyst were intra-ligamentous, he would not hesitate to leave the adherent portion of the cyst wall, or the whole cyst itself, after making a big hole in it, as the fluid it secretes is bland and unirritating to the peritonæum.

Any one examining one of these cysts for the first time would consider it to be of ovarian origin, for it is only by patient search that the ovary can be found, spread out over the cyst wall. The microscrope will decide with certainty in any otherwise doubtful case. The tumor is covered with a beautiful net-work of veins.

When a cyst of the parovarium exists on one side, the ovary of the opposite side is usually found to be diseased, and should be removed. In these cases the remaining ovary was seen to be enlarged, and the site of a small ruptured cyst was pointed out. The fallopian tube was also enlarged, and the terminal vesicle of the fallopian tube, or the hydatid of Morgagni, was enlarged and cystic. This hydatid sometimes attains the size of an orange, and often ruptures spontaneously without any bad effects. A few years ago one of these small cysts ruptured, while he was making an examination of the patient to ascertain its character.

Dr. Goodell exhibited a cancerous womb removed per vaginam. In view of the very fatal statistics of the operation for the removal of the womb, for the radical cure of uterine cancer, he had been unwilling to perform it. In most of the cases where the disease had been seen early enough by him to give a chance of success, the patient had been unwilling to take the risk. On one occasion, when every preparation had been made to operate, the patient had a convulsion, and an examination of the urine showed a high proportion of albumen, in consequence of which he refused to operate. About a month ago Dr. Charles W. Dulles called him in consultation to see a patient in whom the carcinomatous condition was limited to the anterior lip. The womb was movable. The case was put frankly before the patient, and all its dangers pointed out. The choice of them being given to her, she decided, after due consideration, to take the risks of the radical operation. The operation was not as difficult as he anticipated.

The first step in this operation was to scrape away all cancerous tissue, and to sear the remaining surface with Paquelin's cautery. The vagina was then thoroughly cleansed. A stout thread was passed through the cervix to draw down the womb, instead of using a volsellum, the handles of which would be in the way. A circular incision was made around the cervix, and the tissues were stripped up anteriorly and posteriorly to the reflection of the peritonæum, and laterally to the insertion of the broad ligaments. Finally, the peritonæum was opened, and the womb retroverted into the vagina by means of the obstetric crochet passed over the fundus. A strong thread was now passed through the body of the uterus, by means of which to manipulate it more easily. A ligature was now passed around the broad ligament of the right side and secured it *en masse*, and a second double ligature was passed through it and tied on opposite sides. This side of the broad ligament was then divided, the uterus drawn down, and the ligament of the left side secured in a similar manner and divided. The vaginal wound was closed and dressed with iodoform and cotton. A frank peritonitis set in on the third day, and proved fatal on the fourth. The result made him doubtful whether the operation is ever justifiable; he indeed felt disposed to avoid it whenever possible.

Dr. E. E. Montgomery inquired about the feasibility of using the galvanic wire ecraseur to divide the broad ligament, keeping the wire at a low red heat and dividing the tissues slowly, and avoiding the necessity for a drainage tube. Another method which he had been revolving in his mind, was by means of the galvanic knife to dissect out the uterus, leaving the peritonæum intact, thus imitating to a certain extent the operation of Dr. Marion Sims, of scraping and the use of zinc chloride.

Dr. Goodell thought that Dr. Montgomery's galvanic wire would get too hot as the loop became small, and would then divide rapidly like a knife, and incur the danger of secondary hæmorrhage. He fears that the steam generated by the hot wire would penetrate the peritoneal cavity and have an irritating effect. He has a galvanic cautery battery, but has not used it since the introduction of Paquelin's benzoline cautery, as he finds the latter far more handy and manageable. He thinks Dr. M.'s suggestion of shelling out the uterus a very good one.

Dr. Montgomery exhibited, through the courtesy of Dr. W. H. Warder, the uterine appendages which had been removed from a young lady for the relief of dysmenorrhœa, which had resulted in physical and mental failure. Menstruation had commenced at the age of 14 years, had always been painful, and had developed hysterical manifestations. Bathing at the sea-shore had at one time stopped the periods for three months; after this her health failed. Her mind had been seriously affected for the last three years, and she would run away or do herself some violence at the menstrual periods, if not closely watched. Examination—the uterus enlarged and tender; there was profuse leucorrhœa. The os uteri was dilated, and the uterine cavity scraped and cauterized with carbolic acid, and bromides etc., used internally, but no improvement resulted. The ovaries were removed to-day, through abdominal section; catgut ligatures were used. The ovaries are very much enlarged, and contain small cysts. The abdominal wound was closed with silk sutures, and covered with an impervious dressing of collodion, cotton, etc.

HYSTERO-EPILEPSY AS A COMPLICATION OF PREGNANCY.

Dr. William H. Shipps, of Bordentown, N. J., sent the following contribution :

Briefly defined, hystero-epilepsy is a term applied to an abnormal neurotic condition in which are manifested certain phenomena characteristic both of hysteria and epilepsy. Out of 276 patients confined at La Salpetriere Hospital, Paris, under treatment for various nervous affections, 32 were diagnosticated by Beau, a careful observer, as suffering from this disease. Among this number the malady assumed either a distinct or combined form, hence he very wisely groups the cases into two classes. In the first, the hysterical seizures and epileptic fits remain distinct one from the other. To this form he adapts the term given by Landouzy, and designates it as hystero-epilepsy with distinct crises.

In the second class, and the one of which this article furnishes an illustration, the hysterical and epileptic seizures are coeval, both developing at the same time. To this form the name of hystero-epilepsy with combined crises has been given. The object of this paper is not to enter into a consideration of the disease as it is met with in general practice, but simply to examine it as a complication of pregnancy, a standpoint from which, fortunately, we are rarely called to view it.

During the early part of March, 1883, I was called to attend a woman said to be in a fit. Arriving at the house I found, lying on a bed, a young woman apparently seventeen or eighteen years of age, of fairly vigorous physique, who was striving against the united efforts of two or three neighbors who sought to prevent her doing herself bodily harm in the violence of her struggles. Examination showed entire loss of consciousness, eyes open and staring, pupils widely dilated, frothing at the mouth, which was then tightly closed, pulse full and bounding. Inquiry elicited that during the day she had been visiting a friend, herself the subject of some spasmodic affection, and whilst in her company became greatly exercised on some trivial occurrence, and in this state of excitement returned home, which place she no sooner reached than she was seized with a convulsion. Her husband informed me that she was in the third month of pregnancy, and that prior to this morning had had, on two occasions, attacks somewhat similar, though of less severity. I at once injected, hypodermically, one-third grain of morphine, which, in a short time, was followed by a total disappearance of all spasmodic action, a state of stupor supervening from which, in the course of three or four hours, she aroused apparently well as ever. On the day following I was called to see her, and found her in a state of high nervous excitement, sobbing and deploring the presence of some impending danger which she, in her imagination, insisted was threatening her. In a short time the stage of muscular contraction, loss of consciousness, stupor, etc., took the place of the hysterical symptoms, finally terminating as before in a return to her normal condition.

Without attempting to follow the case step by step, taking in all its details, and noting the many and peculiar phases through which it passed, it is interesting to note that prior to Sept. 23, 1883, covering a period of 200 days, not a day passed without the occurrence of one or more paroxysms. At times the hysterical phenomena would be most marked and usher in the attack. Then again the epileptic fit would take the precedence, always, however, accompanied by the undeniable imprint of the dual disease, hystero-epilepsy. In the inter-paroxysmal period she enjoyed, for the most part, average good health.

On the morning of September 23, I was asked to see her in an attack of more than usual gravity. When I reached the honse she was profoundly unconscious, and had been so for several hours. The time for her approaching labor being near, I made a vaginal examination, but found no evidence of commencing uterine action. I ordered a hot mustard bath, mustard to the extremities, and bromides the moment she should be able to swallow. In the evening, when I again called, her condition was apparently unchanged. I then ordered a blister to the nape of the neck and left the patient, to return early in the morning. At 7 A. M. a messenger called stating that the woman was now perfectly rational, and to all appearances in labor. I at once responded, and found that she was having bearing down pains of moderate intensity at intervals of five or ten minutes, mouth of womb dilated, vertex presenting. I remained by the woman's side until 3:45 P. M., when the child, a healthy female, weighing nine or ten pounds, was born. The labor did not differ from ordinary labors, except that it was only by the utmost vigilance that the woman was prevented falling into one of her accustomed attacks. After the birth of the child, I gave it to the mother, at the same time remarking to her that as she valued the life of the child, under no circumstances to allow herself to have another convulsion. She promised faithful obedience, and up to the present has not shown the first indication of her old trouble. It should be mentioned that during the entire period the patient was under observation she had taken large doses of the bromides and other nervines without any effect, save, perhaps, in ameliorating the number and violence of the paroxysms. The case is interesting on account of the rarity of the disease as a complication of pregnancy; its persistence throughout the entire period; its resistence to all remedial measures, and the final disappearance of all symptoms after the termination of labor.

Two queries naturally present themselves: What was the exciting cause of the attacks? Would the induction of premature labor in this and similar cases be justifiable?

In answer to the first query, I attribute the attacks to an action upon the brain and spinal cord, reflex in its nature, and developed or excited by the fœtus in utero.

The happy termination of the case would seemingly offer a negative to the second query, but better judgment will, I think, suggest the wisdom of the operation, and the danger of refusing to employ what, theoretically, at least, offers the only chance of re-

lief. At all events, in a similar case, I would most certainly have recourse to the operation, and expect from it the best results.

BOOK REVIEWS.

APPLIED ANATOMY. By FREDERICK TREVES, F.R.C.S., Assistant London Hospital; Examiner at University of Aberdeen; Professor of Pathology Royal College of Surgeons, England. Henry C. Lea's Sons, Philadelphia. Manuals for Students of Medicine. (From Jansen, McClurg & Co., Chicago.)

Precisely what is meant by the term "Applied" Anatomy, let the writer of this manual himself define.

"Applied anatomy has, I imagine, a two-fold function. On the one hand it serves to give a precise basis to those procedures in practice that more especially involve anatomical knowledge; on the other hand, it endues the dull items of that knowledge with meaning and interest by the aid of illustations drawn from common medical and surgical experience. In this latter aspect it bears somewhat the same relation to systematic anatomy that a series of experiments in physics bears to a treatise dealing with the bare data of that science.

"The student of human anatomy has often a nebulous notion that what he is learning will some time prove of service to him. * * * Beyond these impressions, he must regard his efforts as conçerned merely in the accumulation of a number of hard, unassimilable facts. It should be one object of applied anatomy to invest these facts with the circumstances of daily life; it should make the dry bones live."

The author intends the book mainly for the use of senior students preparing for their final examinations in surgery.

It will be found a valuable means of aiding instruction in the reputable (graded) American schools of medicine equally with the English, for which it was prepared.

On the assumption—which we find in the outset of this manual—that all details in anatomy have not the same practical value, quite a successful endeavor is made to assist the student in judging of the comparative value of what he has learned, and aid him "when his recollection of anatomical facts grows dim; to encourage the survival of the fittest," as the author aptly puts it.

It is needless to say that such a plan of teaching takes for granted a preliminary course of systematic anatomy. The two-year medical student of a non-graded "college" or "university" who passes examinations simultaneously upon anatomy and surgery will not find such a manual an assistance, but an encumbrance, since it introduces two elements—graded study and *thoroughness*, which are openly at war with the system of education under which he is at work.

Incidentally, it may be said of this valuable handbook that most practitioners would not find it too elementary for their use. It has been intended for physicians, as well as advanced students, and, with its well-drawn illustrations and concise definitions of the principles of regional pathology and anatomy, will be found a most convenient work of reference.

E. W. A.

CHEMISTRY: GENERAL, MEDICAL, AND PHARMACEUTICAL, including the Chemistry of the U. S. Pharmacopœia. By JOHN ATTFIELD, F.R.S. Published by H. C. Lea's Sons & Co., Philadelphia.

This is the tenth edition of this valuable work. It is well known to medical students and teachers, and requires no lengthened notice. Each new edition appears well printed and well bound. The analytical charts are compact descriptions of methods of analysis, and have always proved a valuable feature of the work. The descriptions of the elements and the reactions of their salts are clear and brief.

CHEMISTRY: INORGANIC AND ORGANIC, by CHARLES LOUDON BLOXAM, Professor of Chemistry in King's College, London. Published by H. C. Lea's Sons & Co., Philadelphia.

This is another old friend that appears in a new edition. It is a reprint from the fifth English edition. The work has been thoroughly revised and much improved. It contains about 700 pages and many illustrations. Covering as it does, both organic and inorganic chemistry, it is well fitted for a general text-book for medical students.

EPITOME OF SKIN DISEASES, with Formulæ for Students and Practitioners, by the late TILBURY FOX, M.D., F.R.C.P., and T. COLCOTT FOX, M.B., M.R.C.P. Third American edition. Published by H. C. Lea's Sons & Co., Philadelphia.

The present volume is the third edition of Dr. Tilbury Fox's well-known little Epitome of Skin Diseases. It has been edited since his death by his brother, T. Colcott Fox. The work has been amended and many parts rewritten. The first 43 pages are devoted to the consideration of general topics, as the "Elementary Lesions, "Classifications," "Causes of Skin Diseases," "Diagnosis," and "General Principles of Treatment." The remainder is devoted to brief descriptions of the skin diseases. These descriptions are alphabetically arranged. The book is what it purports to be, an epitome, and is good of its kind.

FOREIGN CORRESPONDENCE.

PARIS LETTER.

PARIS, NOV. 30, 1883.

After having been closed for three months, the portals of the Paris Faculty of Medicine were re-opened for the winter session on the 3d inst. I subjoin a list of the professors, with the subjects they are to lecture on, in order to familiarize your readers with the names of some of the leading men of the profession in this country:

Prof. Gavarret, Medical Physics; Prof. Peter, Medical Pathology; Prof. Sappey, Anatomy; Prof.

Wurtz, Medical Chemistry; Prof. Duplay, Surgical Pathology; Prof. Le Fort, Operative Surgery; Prof. Robin, Histology; Prof. Cornil, Morbid Anatomy; Prof. Laboulbenè, History of Medicine and Surgery; Prof. Brouardel, Medical Jurisprudence; Prof. Germain Sée, Clinical Medicine at the Hotel Dieu; Prof. Hardy, Clinical Medicine at La Charité; Prof. Potain, Clinical Medicine at Hopital Necker; Prof. Jaccoud, Clinical Medicine at La Pitié; Prof. Ball, Clinical Pathology of Mental Diseases at the Sainte-Anne Asylum; Prof. Fournier, Syphilitic and Cutaneous Affections at the Saint-Louis Hospital; Prof. Charcot, Diseases of the Nervous System, at La Salpetrierè; Prof. Gosselin, Clinical Surgery, at La Charité; Prof. Richet, Clinical Surgery, at Hotel Dieu; Prof. Vermeuil, Clinical Surgery, at La Pitié; Prof. Trélat, Clinical Surgery, at Hopital Necker; Prof. Panas, Clinical Ophthalmology, Hotel Dieu; Prof. Pajot, Clinical Obstetrics at the Lying-in Hospital. Supplementary Course: — Dr. Henninger, Agrègé, Biological Chemistry; Dr. Blanchard, Agrègé, Medical Natural History; Dr. Landouzy, Agrègé, Medicine; Dr. Richelot, Agrègé, Surgery; Dr. Budin, Agrègé, Obstetrics; Dr. Charles Richet, Agrègé, Physiology; Dr. Raymond, Agrègé, Morbid Anatomy.

After a well-earned holiday, professors and students alike have set to work in right earnest. The lectures have begun at the School of Medicine and at the various clinics, and a spirit of activity seems to pervade the public life of the profession.

The lectures that are attracting most attention at present are those of Professors Jaccoud and Peter, the former at La Pitié Hospital, and the latter at the School of Medicine in the chair of Medical Pathology. Both, though treating of different subjects, manage to take occasion to wage war against the growing tendency of the encroachments in medicine of experimental physiology and pathology on the one hand, and against the microbophobists and their doctrines on the other, as being prejudicial to a proper system of therapeutics.

One of the most interesting hospitals in Paris is certainly "La Maternité," but, unfortunately, it is not open to visitors. Even male medical students are excluded from this hospital, which is devoted exclusively to the instruction of young women educating as sages-femmes, or midwives. The hospital is intended for the poorer classes, and contains in all 416 beds, of which 322 are for patients and 94 for pupils, besides 80 cradles for infants. Dr. Tarnier, the principal surgeon of the institution, has introduced great improvements in it, not only in a sanitary point of view, but in the judicious treatment of lying-in women and their offspring. He has directed his attention particularly to the condition of prematurely-born infants, with the view of giving them as fair a chance of living as those born at the full term, as it is well known that a child born before the completion of nine months intra-uterine life has about 90 per cent. less chance of living than children who are born under natural conditions. To obviate the great mortality among the former, Dr. Tarnier, having realized the fact that the immediate cause of death in these cases was the want of vitality or sufficient power to resist the sudden change from a high to a comparatively low temperature at birth, made this subject a special study. Obstetricians have for a long time been occupied with this question as to the conditions best suited to a new-born babe to enable it to resist as much as possible the variations of temperature to which it is exposed. Guided by the results obtained by the raising of chicks by the employment of artificial heat, by means of an apparatus to which the name of "couveuse," or hatching box, has been given, Dr. Tarnier has applied this method to congenitally feeble infants, whatever may be the cause of this condition, and with the most favorable results, as may be seen by a work just published by M. Auvard, interne of the hospital. The apparatus is a very ingenious one, and all new-born infants in the hospital weighing less than two kilogrammes are placed in it, and kept there until such time as they may be considered in a fit state to be removed. To give an idea of the advantages of this method, M. Auvard reports that before the employment of "couveuses," from the 1st of August, 1879, to the 31st of July, 1881, 116 infants were born at the Maternité presenting the conditions indicated. Of these 116, 76 died. Since the employment of the couveuses, of 79 new-born infants there were only 30 deaths; that is to say, the lives of 30 per cent. were saved. These figures refer to infants born at full term, but weighing less than two kilogrammes. An example of the utility of this method has just occurred at the Maternité, at which a young woman gave birth to triplets, two boys and a girl, all three alive and healthy looking, but they were, nevertheless, put into couveuses by way of precaution, as Dr. Tarnier considered that they cannot be as strong as infants of single birth.

A. B.

STATE MEDICINE.

STATE BOARD OF HEALTH SANITARY REPORT.

By DR. C. W. CHAMBERLAIN, Secretary.

Mortality in August.

	Hartford	New Haven	Meriden	Waterbury	New Britain	Bridgeport	Norwich	New London	Middletown
Total Deaths	104	140	30	43	34	46	57	30	46
Monthly death rate	23	22	17	21	24	15	25	25	38
Zymotics	48	48	18	21	15	14	12		14
Infantile	41	78	12	5	16	22	17	15	18
Nervous diseases	6	19	3	1		2			
Heart diseases	8	8	1	1		2		1	3
Scarlet fever	2	2	1		2		1		
Typhoid fever	3	6	2	13	2	1	1		
Typho malarial fever		1			1				
Malarial fever		2	1			2			
Diphtheria and croup	28				2				5
Measles		3				1	1		
Whooping cough							1		
Infantile diarrhœa	11	28	10	6	8	10	6		5
Diarrhœa and dysentery	2	2	2	2			2		2
Consumption	14	13	1	3	6	7	10	4	6
Pneumonia and acute lung	3	7		2			2		2
Old age	4								2
Railroad accidents	1								
Accident and violence	1	6		1		2	1		
In public institutions	8	15							6
Suicide	1								

The report for August is far from satisfactory in many respects. The mortality is not much different from that of the same month last year, but is considerably above the average for the last five years. The large percentages from zymotic diseases and of deaths under five years of age are especially unfavorable characteristics. The deaths from zymotics reach in some cases nearly to fifty per cent. of the total mortality; that is half the deaths nearly are from causes that are to a great extent preventable. The difference in the limits of the periods in which infantile diarrhœa prevailed in Hartford and New Haven is very noticeable. In Hartford the greatest prevalence was in June, decreasing in July, and comparatively few cases in August; while in New Haven the greatest prevalence was in July, and in August a decrease corresponding to that in July in Hartford.

The prevalence of typhoid fever is the most important element in the sanitary history of the month, when the relative prevalence of this type of disease and malarial diseases are considered. A few years ago scarcely a case was reported from the malarial region; now the cases begin to exceed the malarial, and in places like Manchester, where the two types exist together, the influence is seen in the prevalence of typho-malarial fever. Two fatal cases of this form are reported from South Manchester, and several cases of typhoid fever. The use of a small stream for the disposal of sewage, which is obstructed by numerous dams, thus causing beds of deposits, which from the natural effects of the dry season must have been more or less uncovered and exposed to the sun, furnishes favorable conditions for the causation of typho-malarial fever. This has been repeatedly illustrated in different places. These same agencies would favor the spread of typhoid fever were the malarial influence wanting. The general decrease in the prevalence of malaria and the malarial influence upon others diseases is very marked, in a large part of the territory, where they have been for quite a long period the governing type. With a few exceptions, which tend to strengthen the idea that there must be some local causes to induce the unusual prevalence, I cannot learn of any general activity in the progress or spread of malaria. While there is a much greater prevalence and a more marked influence over other diseases in the northeasterly frontiers of the region that has already been invaded by malaria, there is no such decided prevalence as exists in the region about Manchester. As has been stated, acute-intermittent is very common, and both typho-malaria and malarial fevers exists. In the present uncertainty as to the ultimate nature of malaria, all such manifestations are of peculiar interest.

The cases reported from Hampton this month and previously were imported by a gang of Italian laborors. A few cases of typho-malarial are reported in August, also typhoid fever, the latter indigenous.

The prevalence of typhoid fever is shown in the table. Its frequency is noticeable in Waterbury; from New Hartford, Thomaston and several places in Litchfield county; from a part of Killingly and from several towns in Windham county. More or less cases of typhoid are reported also from different parts of every county.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM DECEMBER 14, 1883, TO DECEMBER 21, 1883.

Campbell, John, Lieutenant-Colonel and Surgeon: having completed the duties pertaining to the office of the Medical Director of the late Department of the South, to proceed from Newport Barracks, Ky., to New York City, and assume the duties of attending surgeon in that city. (Par. 12, S O. 284, A. G. O., December 12, 1883)

Clements, Bennett A., Major and Surgeon: relieved from duty as attending surgeon, New York City, and detailed as member of Army Medical Examining Board, now in session in New York City, (Par. 12, S. O. 284, A G. O., December 12, 1883.)

McKee, J. C., Major und Surgeon: assigned to duty as Medical Director, Department of the Columbia (G. O. 31, Department of the Columbia, December 3, 1883)

Williams, John W., Major and Surgeon: leave of absence on surgeon's certificate of disability, granted in S. O. 157, November 12, 1883, Department of the Columbia, extended five months on surgeon's certificate of disability. (Par. 6, S. O. 286, A. G. O December 14, 1883.)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING DECEMBER 22, 1883.

P. A. Surgeon F. C. Dale detached from the Coast Survey steamer "McArthur," and ordered to the U. S. S. "Adams," at Sitka, Alaska.

Assistant Surgeon L. W. Curtis detached from the "Adams" and ordered to the Coast Survey steamer "McArthur."

Surgeon J. W. Ross detached from the U. S. S "Iroquois", and ordered to the U. S. S. "Onward," at Callao, Peru.

P. A Surgeon C. T. Hibbett detached from the "Onward" and ordered home.

END VOL. I.

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